8-2010

In a Stranger's Shoes: Reducing mental illness stigma through perspective-taking

Caroline E. Mann

University of Tennessee - Knoxville

To the Graduate Council:

I am submitting herewith a dissertation written by Caroline E. Mann entitled "In a Stranger's Shoes: Reducing mental illness stigma through perspective-taking." I have examined the final electronic copy of this dissertation for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Doctor of Philosophy, with a major in Psychology.

Michael A. Olson, Major Professor

We have read this dissertation and recommend its acceptance:

Kristina Coop Gordon, Bethany Dumas, Robert G. Wahler

Accepted for the Council:

Carolyn R. Hodges

Vice Provost and Dean of the Graduate School

(Original signatures are on file with official student records.)

To the Graduate Council:

I am submitting herewith a dissertation written by Caroline E. Mann entitled "In a Stranger's Shoes: Reducing mental illness through perspective-taking." I have examined the final electronic copy of this dissertation for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Doctor of Philosophy, with a major in Psychology.

Michael A. Olson, Major Professor

We have read this dissertation
and recommend its acceptance:

Kristina Coop-Gordon

Robert G. Wahler

Bethany K. Dumas

Accepted for the Council:

Carolyn R. Hodges
Vice Provost and Dean
of the Graduate School

In a Stranger's Shoes:

Reducing mental illness stigma through perspective-taking

A Dissertation

Presented For the

Doctor of Philosophy

Degree

University of Tennessee, Knoxville

Caroline E. Mann

August 2010

Dedication

This dissertation is dedicated to my mentor and friend Melissa Himelein, who first enabled me to fall in love with research, and without whose encouragement I probably would have never pursued the bizarre task of graduate school. I also dedicate this work to my father, Jim Mann, for his support and for bringing science into our lives early.

Acknowledgements

First and foremost I would like to acknowledge my advisor, Michael Olson, for taking a chance on a clinical student, for offering his time and extensive knowledge of prejudice research, but most importantly— for his willingness to entertain almost any idea in a fashion that is at once inviting and skeptical. I would also like to acknowledge the members of my committee— Kristi Gordon, Bob Wahler, and Bethany K. Dumas— for their time and attention to this work. I would like to thank Dan Batson for his important contributions during the research-design phase, and Paula Fite for her statistical knowledge.

I would also like to thank all those who provided essential support and guidance during the process of obtaining my degree, especially: Marci Burroughs, Melissa Bartsch, Kristi Gordon, Bob Wahler, and Deb Welsh.

Finally, I would like to thank Audrey Connor and Jessica Newton for having nothing to do with the graduate world but just being good people.

Abstract

The purpose of this project was to test a perspective-taking intervention for reducing prejudice toward mental illness and AIDS (used as a comparison group). Research within social psychology indicates that perspective-taking (defined as the process of viewing the world through another's eyes) leads to increased empathy and decreased prejudice toward the outgroup. Yet, while such interventions have proven successful with a number of prejudices, they had not been applied to mental illness stigma. This study aimed to address this gap.

A second goal of this project was to explore the theoretical mechanisms underlying perspective-taking, namely: empathy, self-other overlap, and attributions. A unique study-design enabled us to address whether changes in attributions were reflective of a perceptual shift toward the salience of the situation or were indicative of a self-bias pattern.

After pilot-testing the materials, 185 participants listened to interviews of a (fictional) woman describing her experience with bipolar disorder or AIDS. Approximately 1/3 were randomly assigned to take the other's perspective, 1/3 were told to be objective, and 1/3 were given no instructions. Participants then completed a series of dependent measures tapping empathy, self-other overlap, attributions, social distance toward the target, behavioral intentions toward the outgroup (in the form of budget cuts), and other measures.

In both the AIDS and the mental illness scenario, those in the perspective-taking group reported less social distance and less group prejudice, as well as more empathy and self-other overlap than those in the objective condition. The "no instructions" condition mirrored the perspective-taking group on most variables. Attributions differed significantly between groups

and followed a pattern indicative of self-bias, but with most of the action centered on blaming attributions, which were decreased in the perspective-taking condition. Path analyses run using SEM revealed that empathy, self-other overlap, and blaming attributions all partially mediated the relationship between perspective-taking and improved social distance. Yet, for group prejudice empathy emerged as the only partial mediator. These results are discussed in terms of the implications for prejudice research, perspective-taking theories, and the practical task of reducing mental illness stigma.

Table of Contents

List of Figures

Figure Page

"And we always did feel the same,

we just saw it from a different point

of view." -Bob Dylan

Introduction

Social psychology has put enormous effort into understanding the processes underlying prejudice, with almost 2000 articles published on the subject within the past two decades alone (PsycINFO, 2009). Ideally, elucidation of these processes is not merely an exercise in psychological inquiry, but a resource for developing interventions aimed at reducing prejudice among the public. Increasingly, researchers are making strides to translate theory into practice by developing interventions to reduce prejudice.

In this project, we developed a perspective-taking intervention aimed at reducing prejudice toward persons with mental illness, based on the use of first-person narratives. Research within social psychology indicates that perspective-taking (or the process of viewing the world through another's eyes) leads to increased empathy (Batson, Early, & Salvarani, 1997) and decreased prejudice toward the outgroup (Galinsky & Ku, 2004). Such narrative-based interventions have been effective in reducing a number of prejudices (i.e. racism), but they have not been applied to mental illness stigma.

Alternately, successful interventions to reduce prejudice toward persons with mental

illness have been developed in recent years (Corrigan & Penn, 1999), but the research remains relegated to the clinical literature, with little communication between the two adjacent fields. Thus, the first goal of the study was to address this gap by testing the efficacy of a perspective-taking intervention on attitudes toward individuals with psychological disorders.

A second goal of this study was to explore the theoretical mechanisms underlying perspective-taking. Whether reductions in prejudice occur through increased empathy, altered attributions, or through self-other overlap is a current debate within the field. Furthermore, it is unclear exactly how attributions are altered— whether perspective-taking results in a unilateral reversal of the Fundamental Attribution Error or in a pattern more reflective of self-serving biases, which might lend support to self-based theories of perspective-taking.

By examining participants' attributions about both positive and negative events reported by the target individuals, the current study design enabled us to shed some light on the relative prominence of these two cognitive mechanisms in the perspective-taking—prejudice link. Furthermore, we compared these effects with the impact of empathy, another key variable in the equation.

Overall, we hope that these practical and theoretical findings will add to the literature on perspective-taking and also work toward cross-pollination between clinical and social researchers focused on prejudice.

Before describing the details of this project, it is important to contextualize the current study within the social psychology literature on prejudice interventions and perspective-

taking in particular, as well as the clinical literature on mental illness stigma. After summarizing key research in these areas, we will move on to describe the current project, which includes a pilot study and a main experiment.

Prejudice Interventions

While numerous and creative interventions exist to combat prejudice, most programs fall into three categories: education, contact, or simulation. Educational programs attempt to reduce prejudice through cognitive routes, by providing information that contradicts stereotypes. Under usual circumstances, traditional educational interventions have been shown to be ineffective in reducing prejudice (Lazarfeld, 1940; Mann & Himelein, 2004). Yet, if special efforts are made to provide content that might counteract key myths (such as the notion that people with mental illness are dangerous or African-Americans are lazy), research indicates that some educational interventions can lead to significant changes (Keane, 1991; Morrison, 1980; Penn et al., 1994). Educational interventions have the benefit that they can be employed with large numbers of people and may even be administered through vicarious routes (i.e. television, books). For this reason, they are arguably the most popular form of intervention used.

Yet, they are not the most powerful. Meta-analyses indicate that contact programs are more effective than educational interventions, especially in reducing prejudice toward mentally ill individuals (Corrigan, River, Lundin, Wasowski, Campion, Mathisen, et. al., 2001). By having participants interact with a member of the outgroup, contact interventions

attempt to change prejudice through more affective and interpersonal routes.

These programs have their roots deep in social psychology with Allport's original (1954) intergroup contact hypothesis. Many of Allport's ideas have since been corroborated by modern research, including the notion that contact interventions must include specific "conditions" to create change, such as equal status and cooperation between participants (Wittig & Grant-Thompson, 1998). In other words, mere proximity is not enough to reduce prejudice. Following widespread integration in the school system, for example, studies found that for the most part white and black children just avoided each other (Gerard & Miller, 1975). Similarly, prejudice was not decreased when handicapped children were integrated into traditional classrooms (Johnson & Johnson, 1989).

However, when participants of equal status engage in cooperative and interactive activities, contact interventions are successful in reducing a wide variety of prejudices, according to a meta-analysis of over 700 studies (Pettigrew & Tropp, 1998). Many mechanisms are cited in this success, including the activation of empathy, contradiction of stereotypes, self-other overlap, formation of a new "ingroup", and decreasing of anxiety (Oskamp, 2000).

Simulation studies have also received strong empirical support (Stewart, Laduke, Bracht, Sweet, & Gamarel, 2003; Clore & Jeffery, 1972). In these experientially based interventions, participants assume the role of the outgroup or are treated as if they are a member of the stigmatized group. The first example of this comes from the classic "blue eyes-brown eyes" experiment, in which school teacher Jane Elliot divided her students into groups based on eye-color, where they experienced first-hand the effects of dominant and non-

dominant status in society. Though some recent research has found only moderate effects of the classic "blue eyes-brown eyes" simulation, participants reported it was a meaningful and insightful experience more than 20 years later (Byrnes & Kiger, 1990), and a host of other studies have shown positive effects of the blue eyes-brown eyes diversity training (Nyberg, 1990; Stewart et al., 2003).

Evidence for the use of prejudice simulations has continued beyond the original "blue-eyes, brown-eyes" experiment. A similar study by Weiner & Wright (1973) found that using simulation exercises in which children were both the victims of prejudice and discrimination as well as the "perpetrators", children in the experimental condition were more likely to seek interracial contact and less likely to hold prejudiced beliefs two weeks after the intervention.

Yet, while contact and simulation interventions boast powerful effects, they also possess a serious weakness: Such interventions are time-consuming and cannot be done with large groups. Contact interventions may also place an undue burden on minority individuals who have to come forward and be willing to serve as the main vehicles of change. Thus, much work remains to be done in developing interventions that are both practical and powerful.

Perspective-taking Interventions

One potential approach that has arisen out of both the contact and simulation traditions is perspective-taking, or the process of imagining the world from another's point of view (Galinsky, Ku, & Wang, 2005; Cialdini, Brown, Lewis, Luce, & Neuberg, 1997).

Experimental induction of perspective-taking often uses a procedure where participants are exposed to a narrative of an individual from a specific outgroup (i.e.: Batson, Polycarpou, et al., 1997; Finlay & Stephan, 2000). They are then instructed to see this narrative through an objective lens (control condition) or through the eyes of the speaker (experimental condition). Thus, in many ways perspective-taking serves as a form of vicarious contact and imagined simulation as the individual puts themselves in the others shoes mentally.

Research on perspective-taking interventions dates back to at least 1972, when Clore & Jeffrey developed a program in which school children literally assumed the role of a disabled person for a day (i.e. was in a wheel chair or had one arm behind their back). This intervention was found to improve attitudes toward disabled persons— a result that remained four months later. While this experiment was admittedly more experiential than current perspective-taking protocols, it served as an initial example in the field.

Today, a large body of literature now corroborates these findings with more imagined, rather than literal, manipulations. Being instructed to take the perspective of another consistently leads to decreased stereotyping and prejudice, a finding that holds for a wide array of groups (Batson, Polycarpou, et al., 1997; Finlay & Stephan, 2000; Galinsky & Ku, 2005). Current studies show that perspective-taking facilitates social bonds and reduces inter-group bias toward both the individual and their respective group (Batson, et al., 1997; Vescio et al., 2003; Stephen & Finlay, 1999). Seeing things through another's point of view has also been found to reduce the drive toward expectancy confirmation, or the tendency to interpret others' ambiguous behavior in line with our pre-existing stereotypes of them (Galinsky & Ku,

2005). Interestingly, however, these positive effects in reducing expectancy confirmation only occurred when directions for perspective-taking were precise and vivid. In other words, may not enough to simply tell people to walk a mile in another's shoes; you have to instruct them on how to put the shoes on.

Theoretical Mechanisms of Perspective-Taking

Thus, the efficacy of perspective-taking manipulations has been well demonstrated, reducing prejudice toward many groups (i.e. Blacks, homeless individuals, disabled persons) in both children and adults (Clore & Jeffery, 1972; Batson, Polycarpou, et al., 1997; Finlay & Stephan, 2000). Furthermore, the effects are observed on more "cognitive" constructs such as stereotypes (Galinsky & Moskowitz, 2000) as well as "emotional" variables like empathy (Batson, Early, & Salvarani, 1997), in attitudes toward the group and toward the individual (Stephen & Finlay, 1999), suggesting that perspective-taking is a powerful intervention.

Yet, while the success of perspective-taking manipulations has been well documented, the mechanisms behind their success remain unclear. Currently, there are three main theories in the field: the empathy hypothesis (Batson, Batson, Slingsby, Harrell, et al., 1991), the attributional explanation (Vescio, Sechrist, Paolucci, 2003), and self-other overlap theory (Galinsky, Ku, & Wang, 2005). We will summarize the empirical data supporting each hypothesis before proceeding to the current study, which attempted to disentangle the relative contributions of each mechanism on the perspective-taking—prejudice link.

According to Batson and colleagues, empathy is a direct product of perspective-taking

interventions (Batson, Early, & Salvarani, 1997). In his classic three-step model, Batson places empathy at the center of the perspective-taking— prejudice connection. First, adopting the perspective of another leads to empathic feelings toward that person. These emotions then cause us to value the other's welfare. Finally, assuming group membership is salient, this valuing expands to include the group as a whole and elicit positive attitudes toward that outgroup. Under this framework, Batson emphasizes that the effects of such empathy will be limited to the specific group of the individual (i.e. women with AIDS), and research supports this notion.

Empirical support for Batson's theory comes from results indicating that empathic feelings are consistently evoked during perspective-taking situations (Coke, Batson, & McDavis, 1978). Specifically, in a series of three experiments Batson and colleagues (1997) found significant reductions in prejudice toward women with AIDS, homeless people, and even convicted murderers following a perspective-taking intervention. Most importantly, they found that empathy beat out other variables such as victim responsibility to account for as much as 70-90% of the variance in attitudes.

In the 1997 Batson study, participants listened to first-person narratives by the target individuals where the variable of victim responsibility (i.e. whether the woman contracted AIDS via unsafe sex or a blood transfusion) was manipulated. Dependent measures included Batson's empathy scale and a questionnaire tapping attitudes toward the target group. No self-other overlap items were included, nor was a direct attributional measure present. However, the manipulation check of victim responsibility was "attributional" in nature,

asking participants to report how much they felt the target individual's status (i.e. homeless, HIV positive) was their own fault. Thus, Batson's study does offer strong evidence for the role of empathy as a key mechanism in the perspective-taking process, although it cannot prove primacy.

The second theory emphasizes the role of attributions in perspective-taking. The rationale for this theory is rooted in the Fundamental Attribution Error (FAE)— the tendency to overemphasize internal factors and underemphasize external or situtational forces when explaining others' behavior. In 1979, Pettigrew expanded the FAE to the group level, terming it the Ultimate Attribution Error (UAE). This pattern of inter-group bias mirrors that of the FAE, and is linked to increased prejudice among group members (Vescio & Biernat, 1999). In this process, a person sees an ambiguous behavior (i.e. an African-American woman using food stamps) and attributes it to internal causes (i.e. "African-Americans are lazy") rather than external forces (i.e. "African Americans often have fewer resources and job opportunities").

In part, this disparity in attributions results from a simple discrepancy in perceptual fields: When we look out from our own eyes, it is the environment that appears central; however, when we observe others, it is the person that occupies the salient position— an asymmetry known as the actor-observer bias (Jones & Nisbett, 1972). Thus, we tend to see our own behavior as environmentally influenced, whereas others' actions appear to emanate from somewhere within them. This affects prejudice by leading to more "blaming" attributions regarding the outgroup as well as a decreased understanding of the outgroup's

environmental and cultural context.

In line with this theory, experiments show that changing perceptual fields with the other or "turning observers into actors" has been shown to reverse the actor-observer bias (Duval & Wicklund, 1973; Regan & Totten, 1975). This manipulation is accomplished by showing participants video footage of a crime, filmed either from a 3rd-person perspective, or from the eyes of the victim. Results indicate that the visual perspective taken impacts the attributions made about the crime. It follows, then, that perspective-taking might reduce prejudice by similarly altering attributions.

This is precisely what Vescio and her colleagues found (Vescio, Sechrist, & Paolucci, 2003). In their expansion of Batson's experiment, they focused on a different target group (African-Americans) and also tapped participants' ideas of whether the target's troubles were due to something within him (internal attribution) or within his environment (external attribution). They found that empathy did contribute significantly to the effect of perspective-taking on prejudice, but attributions were a better predictor.

While Vescio's study offers more of the picture, it has two key weaknesses as well: First, it does not include a measure of self-other overlap and therefore cannot address the relative prominence of the self in the perspective-taking process. Secondly, while it measures attributions about "problems," it does not measure attributions about positive events. As we will examine later, recent research on the fundamental attribution error suggests valence is a key dimension to explore, especially when looking for the role of the self.

The third theory on perspective-taking is Galinsky's self-other overlap theory, wherein

the benefits of perspective-taking accrue through the cognitive merging of self and other. During this process, the barriers between ingroup and outgroup— "us" and "them"—become blurred. Research shows that perspective-taking leads us to see more of the other in ourselves, and more of ourselves in the other (Galinsky & Moskowitz, 2000). When the other becomes part of the self, that individual then gains the benefits usually associated with the self or ingroup, such as more charitable attributions.

In effect, Galinsky views perspective-taking as a unique route to reducing prejudice through our own inescapable egoism. The problem and the solution are cut from the same cloth; he states:

> [Perspective-taking] builds off egocentric biases to improve outgroup evaluations. It focuses on how de-biasing intergroup thought is often best accomplished by working through the very processes that produced the bias in the first place (Galinsky & Ku, 2004, p.594).

In other words, humans are interminably selfish creatures who offer many benefits to themselves and their ingroup. If the other or outgroup can be subsequently reframed as the self or ingroup, prejudices toward this party will be eased.

There is some evidence for the predominance of this process over other variables. For example, Cialdini and colleagues conducted an experiment that included both empathy and "oneness" as potential mediators. They found that "oneness" accounted for more of the variance in helping behavior than did empathy (Cialdini, Brown, Lewis, Luce, & Neuberg,

1997). However, it is important to note that the procedure differed greatly from Batson's traditional perspective-taking protocols. Rather than listen to narratives of relative strangers, participants were instructed to imagine the life of a friend or acquaintance. Thus, as Batson argues, it is possible that faux self-other overlap effects occurred given the lack of detailed information provided about the target individual (personal communication, March 2007). In other words, self-other overlap was the only potential mechanism in this situation given that there was no information about the "other" with which to empathize; restraints forced participants to "project" the self onto the other.

Nonetheless, if Galinsky's model is correct, and attitudes toward the other come from attitudes toward the self, it follows that self-esteem would mediate the relationship between perspective-taking and prejudice. This is exactly what Galinsky & Ku (2004) found when they examined both stable self-esteem and temporarily induced negative esteem: For those individuals that did not sufficiently value themselves, perspective-taking did not cause them to value the other— indicating that self and other are interdependent in this process. Unfortunately, however, Galinksy and Ku's procedure was again the procedure that Batson criticizes, wherein participants must imagine the other in the absence of information, thereby being forced to call upon knowledge of the self more than might otherwise be true. It should be also be noted that some studies (i.e. Van Heck & Dijkstra, 1985) have failed to find an effect for self-esteem or other self-related variables on the perspective-taking—prejudice link. This apparent inconsistency in the self-other overlap mechanism (or at least results reflecting this mechanism) leaves room for doubt and exploration.

Since the publication of Vescio's attribution-based study, it is important to note that research has called into question the essential nature of the Fundamental Attribution Error, lending support to Galinsky's self-related processes and simultaneously questioning some of the assumptions underlying Vescio's attribution theory. A meta-analysis with surprising results (Malle, 2006) found that the actor-observer asymmetry held for negative occurrences, but not for positive events—a pattern that mirrors that of the self, implying that activation of the self on some level may be key in perspective-taking.

The notion of such self-serving biases dates back to 1975, when Miller and Ross found that attributions also varied based on the relative valence (positive or negative) of the event in question, not just along the internal-external dimension. Since that time, a large body of research has supported the notion of a self-serving bias in attributions (see Sedikides & Gregg, 1998) This complicates the picture, suggesting that humans tend to make external attributions for negative events (i.e. "I failed the test because the professor hates me") and internal attributions for positive events (i.e. "I aced that exam because I am smart."). This line of research— placing the self at the center of attributions— may lend credence to Galinsky's theory. If attributions are not driven primarily by perceptual differences in the centrality of the actor or the environment, but are instead fueled by a need to boost the self, then this raises the question of whether the impact of perspective-taking interventions on attributions is mediated by the role of the self and in fact creates a more complex pattern.

Galinsky's model emphasizes self-other overlap, but does not specify in which direction this occurs. It is possible that participants are simply projecting their own ideas (i.e.

schemas, stereotypes, self-knowledge) onto the other; they may be genuinely internalizing accurate information about the other into their existing selves, or some combination of the two processes. Which process is primary may depend on the experimental procedure used, as Batson argues. For example, in one study (Galinsky & Ku, 2004), participants were asked to write "a day in the life of" a target individual, having only a photograph of that person. In such a low-information condition, Batson argues that participants are forced to draw upon their limited (and often stereotypical) knowledge of the group or, alternately, their own self-experience. This leads to a projection-like process wherein the self is used to fill in the blanks of the other. Indeed, studies (i.e. Galinsky, Ku, & Wang, 2005) where participants behave in more stereotypical ways after perspective-taking lend support to the notion that, when there is not specific information to draw from, individuals may naturally resort to activating stereotypes. Furthermore, it is important to note that in such situations, there is no extant information about an "other" with which to empathize, thereby ruling out the potential for empathy to emerge as mediator. Yet, it is unclear how self-other overlap operates in studies with more vivid, realistic information available about the other—a gap we aimed to address in the current project.

In sum, all three theories (empathy, attributions, and self-other overlap) have garnered some empirical support, leaving the open question of whether these variables are truly orthogonal, or whether it is a matter of perspective. Our aim in this research was to disentangle the relative contribution of each mechanism. In our estimation, the empathy hypothesis was not necessarily antithetical to Galinsky's self-other overlap theory: What are

feelings of empathy if not feeling at one with the other person? Do key forces in the empathy equation, such as caring for the welfare of another, come from the idea that observer and actor are closer, due to reduced self-other boundaries? Whether these effects emanate from cognitive mergers or feed them may be difficult to determine, but the potential for theoretical synthesis is there. Furthermore, there is some overlap between Galinsky's self-other overlap hypothesis and Vescio's attributional theory, as both predict the same attribution pattern between perspective-taking and control groups toward negative events.

Yet, while there may be a complementary compatibility these theories, there are also key differences between them— specifically the self-other overlap vs. attributional theories— that may enable researchers to disentangle the underlying mechanisms of perspective-taking. Both attribution theory and self-other overlap account for changes in prejudice through some version of the outgroup being treated as if it is the ingroup. However, reasoning derived from traditional attribution theory makes a different set of predictions than would follow from self-other overlap theory. Specifically, if the link between perspective-taking and prejudice is driven by a reversal of the FAE, as Vescio's study suggests, one would expect participants to make external attributions for the other unilaterally, across both negative and positive events, since their imagined physical perspectives are being changed equally on those occasions. However, if the active mechanism requires more than a perceptual shift and must include the self, as Galinsky asserts, then one would expect to observe a different pattern: Participants' attributions about the other would mirror those found in self-serving biases, with negative events being attributed to external causes and positive events being attributed to internal

causes. In other words, there would be a significant 3-way interaction between valence of an event to be explained, attributional direction, and condition. At this time, no previous research has addressed these uniquely separate attributional effects in conjunction with a perspective-taking intervention.

These divergent predictions can be understood via the following graphic (see Figure 1), where perspective-taking and objective conditions are compared.

The current study aimed to test the models depicted above. By manipulating the valence of events within the first-person narrative, we were to examine the possibility of differential attributions for positive and negative events. This allowed us to explore the relative prominence of the two cognitive mechanisms (self-other overlap vs. attribution theory) possibly underlying perspective-taking. In theory, Galinsky's self-other overlap theory would be represented by a three-way interaction between condition, event valence, and attributional direction.

Secondly, by including a measure of empathy as a dependent variable, we were able to test for the mediating effects of an affect and empathy-based process in this equation. To our knowledge, this is the first such study in which all three mechanisms are included and in a procedure

Objective: *Perspective-Taking:* *Objective:* *Perspective-taking:*

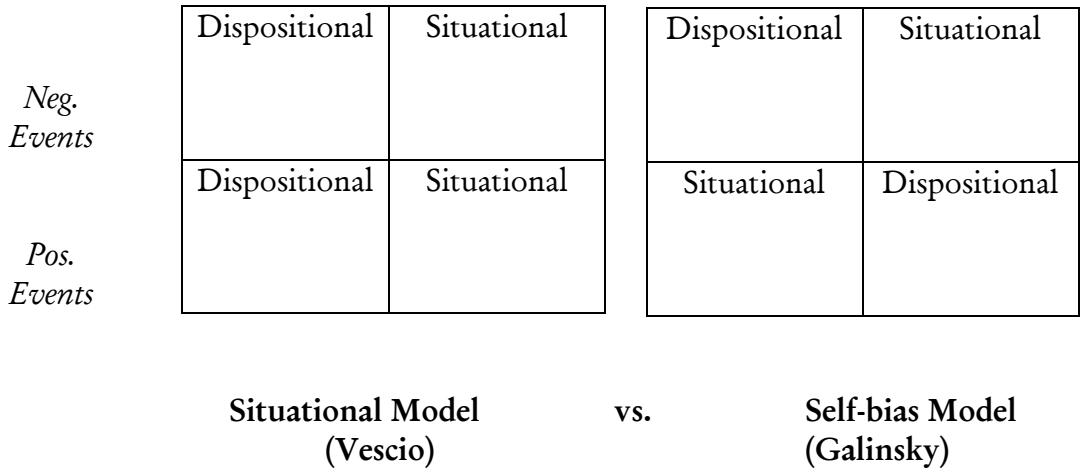


Figure 1: Situational vs. Self-biased Attribution Models

that follow's Batson's traditional perspective-taking model. Thus, one goal of the present study is

to shed light on the relative prominence of hypothesized mechanisms in explaining the perspective-taking— prejudice link.

Mental Illness Stigma

The second goal of this study is applied, and seeks to extend the perspective-taking literature to a new form of prejudice— mental illness stigma. The majority of research on mental illness stigma remains confined to the fields of clinical and counseling psychology, with little communication with social psychological research. Many interventions to reduce stigma contain components of perspective-taking, but authors appear unversed in this adjacent field, making no reference to studies by Galinsky and others. Similarly, social psychologists have not addressed prejudice toward those with psychological disorders. This study hopes to unify research from both fields, drawing from sources within the clinical and social literature.

Mental illness stigma is an important topic with widespread societal implications. A large body of evidence now confirms the U.S. Surgeon General's 1999 report, which identified stigma as the number one barrier to mental health treatment in this country. Greater perceived stigma among those with mental illness has been consistently associated with reluctance to seek treatment (Corrigan, 2005), premature discontinuation of medications (Sirey, Bruce, Alexopoulous, 2001; Perlick, Raue, Friedman, et. al., 2001), low self-esteem (Link, Struening, Neese-Todd, et. al, 2001), and social impairment (Perlick, Rosenheck, Clarkin, et. al., 2001). Stigma also creates discrimination in jobs and housing (Hinshaw & Cicchetti, 2000), and limits the amount of resources allotted to mental health services (Corrigan, 2005), imposing multiple barriers to recovery.

There are only two empirically validated interventions to reduce mental illness stigma at this time: contact and education, with contact being the more powerful of the two (Corrigan et. al., 2001). For example, in a randomized control trial of orchestrated contact in the laboratory, participants who cooperated with a mentally ill individual on a shared activity reported more positive attitudes toward both that individual and others with psychological disorders (Desforges et al., 1991). Furthermore, this attitude change was maintained one week later and corresponded to increased helping behavior (Corrigan et al., 2002).

As previously discussed, in both the larger social psychology literature (Pettrigrew & Tropp, 1998) and the studies on mental illness stigma (Corrigan et. al, 2001), evidence suggests that contact is more effective when there is "equal status" between individuals participating (i.e. students talking ot students) or when there is "cooperative activity." One might wonder

whether this equal status and cooperation facilitates empathy or self-other overlap.

It is interesting to note that many of the key variables associated with effective stigma interventions mirror components of perspective-taking. For example, research shows that educational interventions are most successful when they incorporate personal information about the mentally ill individual, increase empathy through simulations, directly attack myths, or involve discussion (Corrigan & Penn, 1999). The first two factors are salient in perspective-taking interventions.

Though no studies have directly tested the effects of perspective-taking protocols on mental illness stigma, Mann & Himelein (2004) obtained promising results using a related intervention embedded within the introductory psychology curriculum. Based on the key variables identified by Corrigan & Penn (1999), we devised an alternative method of teaching psychopathology (termed the humanizing approach) that incorporates first-person perspectives of mental illness, and culminates in a direct perspective-taking exercise designed to increase empathy. In this project, students were asked to write poetry from the perspective of someone with a mental illness. We compared this intervention to a control group who received "education-as usual," with an emphasis on the diagnostic features of psychopathology. Results indicate that students in the humanizing classroom demonstrated significant decreases in stigma, whereas those in the traditional classroom showed no change. These findings were echoed in a follow-up study the next semester.

While the former study holds practical significance for those working within the field, it cannot offer definitive theoretical evidence for social psychologists. Because the

intervention contained many variables (i.e. first-person narratives, a perspective-taking exercise, videos about mental illness), we cannot determine whether it was the perspective-taking, per se, that led to improved attitudes. The current study aimed to address this question directly, by isolating the variable of perspective-taking in a controlled environment and examining its effects on mental illness stigma.

Research Questions

This project sought to answer two primary questions. First: does perspective-taking lead to decreased stigma toward mental illness? We hypothesized that it would, drawing from research on attitudes toward other groups such as African-Americans, homeless individuals, disabled persons, and people with AIDS (Batson et. al., 1997, Galinsky & Ku, 2005; Clore & Jeffery, 1972). However, it is possible that stigma toward mental illness differs from these prejudices along key dimensions such as: changeability (i.e. one cannot become African American, but one can become mentally ill), visibility (Levin & Van Laar, 2008) (it is often difficult to "see" mental illness, whereas physical disability is more obvious), and controllability (the individual has more agency over contracting AIDS than developing schizophrenia).

In many ways, prejudice toward mental illness may be more analogous to prejudice toward GLBT persons. Research on homophobia now corroborates the popular notion that "fear of becoming gay" (and arousal to homosexual images without acknowledgment of that arousal) may factor into negative attitudes toward gay individuals (Adams, Wright, & Lohr,

1996). Similarly, Farina (1981) found that participants showed more aggression toward mentally ill persons when they felt their illness was out of their control and could happen to anyone. Drawing from research on ageism, it is possible that seeing others with mental illness triggers anxiety about our own fallibility (especially if the illness is "outside their control"), raising the notion that we could join that outgroup someday, not by our own choosing (Martens, Goldenberg, and Greenberg, 2005; Nelson, 2005).

Such complex dynamics lend caution and raise the question of whether perspective-taking interventions will indeed be as effective in reducing prejudice toward mentally ill persons. The first goal of this study was to examine this possibility.

Secondly, this study approached the question of which theoretical mechanism plays a larger role in perspective-taking— basic attributional changes, self-other overlap, or empathy? Because there is evidence on all sides of this debate, we did not offer a specific hypothesis on the subject, but rather approached this experiment with open curiosity.

Finally, we included in our study three potential moderator variables— motivation to control prejudice, natural perspective-taking orientation, and self-esteem. The first two were generally hypothesized to increase the effectiveness of the intervention in reducing stigma, but no more specific predictions are made because there is little research on this topic. According to Galinsky, self-esteem should moderate the effects of self-other overlap on stigma, so this hypothesis will also be tested. Other personal experience variables (i.e. whether a participant has been in therapy or had experience with mental illness) will also be explored as covariates, with no specific predictions offered. It seemed likely, however, that personal experience with

mental illness or therapy would facilitate empathy with someone grappling with mental illness themselves.

Project Overview

To examine these questions, this study employed a quantitative experiment similar to that used in previous perspective-taking studies. Prior to beginning this main project, however, we conducted a pilot study (including both quantitative and qualitative data) to test the stimulus materials and dependent measures.

Pilot-Study

Pilot Study: Overview

The goal of the pilot study was to develop and test first-person narratives of an individual struggling with mental illness and another character dealing with AIDS. Prior to use in the main study, it was important to determine whether these narratives were sufficiently vivid and realistic, as well as whether they were viewed in similar ways so that comparisons between types of prejudice could later be tested.

Pilot Study: Stimulus Materials

First, two fictional first-person narratives were developed for use this study— the first

of a person with bipolar disorder, the second an individual with HIV (see Appendix A-1 & A-2). The latter narrative is included as a comparison to previously researched attitudes, and uses a character based on previous stimulus materials developed by Batson and colleagues (1997).

The narratives were designed to be sufficiently vivid and realistic, and were composed by the first author, who also has a background in creative writing. Careful consideration for realism in portraying the whole person (not just their stigmatized problems) and providing plentiful information gives this study another strength: it offers an even-handed invitation for empathy and perspective taking not always present in other studies. Again, this is key because Batson theorizes that limited information may lead to faux self-other overlap effects (personal communication, March 7, 2007), and because Corrigan et. al. (2001) sites including personal information about the mentally ill individual as one of the critical factors in effective interventions.

To tap different attributions, which will help us examine some of the theoretical mechanisms behind perspective-taking, each narrative includes three positive events in the person's life (i.e. finding a desirable apartment) and three negative events (i.e. losing one's job). The severity of positive and negative events was matched across both narratives, so that the narratives differed primarily in the diagnosis of the individual, not in other aspects of life. Specifically, the character with AIDS experienced the positive events of graduating, winning an art prize, and having a new best friend, while the character with bipolar disorder described her new dog, having her writing published, and having a good apartment. In terms of

negative events, the person with AIDS discussed getting HIV, losing her job, and her best friend moving away, while the person with bipolar described her depression, being in the hospital, and losing her journal.

After being finalized, the narratives were transformed into a script of an "interview". A young woman with acting experience served as the "interviewee" while the second author (a male) played the interviewer. When recorded, each narrative was approximately 5 minutes long.

Pilot Study: Participants

To test the authenticity of the stimulus materials, 30 participants were recruited from introductory psychology classes via a web-based sign-up system. No one was excluded on the basis of age, race, gender, sexual orientation, or any other factor. The sample (20 females, 10 males) consisted of 27 white students, and 3 African-Americans and had an average age of 18.90— demographics reflective of freshmen in the larger university.

Pilot Study: Procedure

To obscure the fact that this study is examining prejudice (and thereby minimize the effects of social desirability), the procedure was presented under the guise of a faux research question: Participants were told that the researchers were interested in the construction and comprehension of personal narratives, and were examining their perceptions of the stories presented.

After reading and signing the consent form (Appendix B) participants were seated in front of a computer with headphones and told that they would be listening to an interview of a graduating senior describing their "high points" and "low points" at UT. They were informed that the interviews chosen were some of the most interesting ones collected from a previous project on personal narratives conducted at UT (which was actually fictional). This rationale was given to help explain why the narratives are so uniquely full of serious events.

Participants were randomly assigned to hear either the bipolar narrative or the HIV narrative.

Pilot Study: Dependent Measures

After listening to the narrative, participants completed a series of measures designed to tap their opinions about the fictional individuals, the narratives, and the events described therein. This information was used to determine if a) the narratives evoked sufficient empathy, b) the positive and negative events described in the narratives could be attributed to various external and internal causes with sufficient variability, and c) the narratives were viewed as realistic and compelling.

To capture the amount of empathy felt, we used Batson's (Batson, Batson, Slingsby, Harrell, et al, 1991)) self-report empathy scale. in which participants rate the degree to which they are experiencing various emotions (i.e. warm, compassionate, tender) toward each of the target individuals. These ratings are made using a 7-point Likert scale ranging from 1, "not at all," to 7, "very much so" (see Appendix C).

To minimize forced decisions, attributions were first measured using open-ended questions as well as a typical closed-ended internal-external continuum scale. For each positive and negative event in the vignette, participants were asked to report (in an open-ended format) why they think the event likely occurred; they could list up to 5 reasons. Responses were then to be coded for external and internal causes using the CAVE (Content Analysis of Verbatim Explanation) coding system (Peterson, Luborsky, & Seligman, 1983).

After this open-ended explanation was elicited, participants were then asked to complete a traditional attribution measure like that used by Vescio and Biernat (1999) (Appendix D). Because studies have shown that dispositional and situational attributions may actually be independent of each other (i.e. participants could have both high dispositional and situational attributions about an event), we opted to use two unipolar scales rather than a single bipolar scale, which might impose unnecessary constraints. This is also departure from some of the previous research on attributions, and presumably offers an additional advantage to this study. Thus, participants first rated (from 1 to 7) how much they felt "dispositional factors" or "factors within the person such as their personality or will" were the cause of the event. Next they were asked to rate (from 1 to 7) how much they felt "situational," or factors outside the person in their environment, caused the event.

Stigma was measured using a well-validated social distance scale (Appendix E) used in previous research (Mann & Himelein, 2004). In this questionnaire, seven items ask participants to report how likely or unlikely (on a 7-point Likert scale) they would be to engage in a number of social activities with the target individuals, such as dating or working

together.

Finally, participants completed a few additional measures asking basic, transparent questions regarding the realism and relatability of the individuals in the narratives. This included both a close-ended 7-point Likert scale as well as an open-ended questions eliciting participants' general impressions of the target individual.

Pilot Study: Results

Participants showed an average empathy index of 3.87 (range= 1-7, SD=.943), with a range of 2.00-6.50 in a normal distribution curve. These figures were discussed with the scale's developer, Dan Batson, and compared with previous research data. They were judged to be appropriate.

Next, the stigma total was examined, with participants showing an average of 31.98 (out of a possible 49, with higher scores indicating greater comfort) (SD=5.21). The range was 18-43, also normally distributed. These averages are within the expected values given previous data, and there were no apparent ceiling or floor effects in the data. As expected, participants did report significantly greater stigma toward the Bipolar individual (M=28.67) compared to the AIDS individual (M=34.98) ($df=1$, $F=18.79$, $p<.001$).

We then set out to code and analyze the qualitative data on attributions. Unfortunately, participants' responses on this measure were frequently insufficient or inappropriate, and there was significant missing data points. For example, 3 out of the 14 reporting participants (21.42%) listed the reason the interviewee got a poetry award as

"whatever" (or a similar expression). Such answers were deemed inappropriate for coding in terms of internal/external, global/stable dimensions.

Therefore, chose not to analyze the qualitative attribution data and instead turned to the closed-ended questionnaire. First, individual items were examined to determine if the 3 positive and negative events in the narratives elicited a variety of attributions. Distributions were normal and means for each item fell right above the mid point for the scales. Table 1 summarizes the data for each item, by stigma type.

Next, we created four summary variables (negative dispositional, positive dispositional, negative situational, and positive situational) by adding participants' likelihood ratings on each of the 3 items for each category. T-tests were run on each variable to test for differences between the two narratives. Analyses were non-significant for positive situational ($t=-.140$, $df=28$, $p=.889$), positive

dispositional ($t=-1.27$, $df=28$, $p=.215$), and negative situational indexes ($t=-.292$, $df=28$, $p=.772$). However, there was a significant difference found on negative dispositional attributions, with participants hearing the bipolar narrative reporting more of these "blaming" attributions than those in the AIDs condition ($t=2.40$, $df=28$, $p=.023$; $M=15.00$ vs. $M=12.27$, respectively). (See Table 2 for more details).

Finally, we examined the qualitative data on the narratives and target individual (interviewee). Again, a problem arose with missing data, as 9 and 10 individuals (30% and 33.33% of participants) did not fill out the item on the target individual or the narrative, respectively. Nonetheless, tentative analyses were conducted

Table 1

Descriptive Statistics for Attribution Items

	Bipolar Stigma		AIDS Stigma	
Item	*Mean*	*SD*	*Mean*	*SD*
Pos. Situational 1	5.22	1.22	5.67	1.28
Pos. Situtational 2	4.92	1.84	4.21	1.83
Pos. Situational 3	5.24	1.08	5.35	1.44
Pos. Dispositional 1	4.89	1.65	5.38	1.42
Pos. Dispositional 2	5.76	1.34	5.68	1.69
Pos. Dispositional 3	4.82	1.60	4.44	1.26
Neg. Dispositional 1	5.46	1.19	4.31	1.45
Neg. Dispositional 2	4.89	1.37	4.33	1.27
Neg. Dispositional 3	4.66	1.33	4.52	1.19
Neg. Situational 1	5.52	1.49	5.41	1.75
Neg. Situational 2	5.17	1.43	5.32	1.45
Neg. Situational 3	3.68	1.45	4.69	1.66

Table 2

Descriptive Statistics for Attributional Totals

	Bipolar Stigma		AIDS Stigma			
Item	*Mean*	*SD*	*Mean*	*SD*	*T value*	*P value*
Pos. Situational Total	15.49	3.21	15.23	3.12	-1.40	ns
Pos. Dispositional Total	15.67	3.19	15.62	3.34	-1.27	ns
Neg. Situational Total	14.44	3.32	14.70	3.77	-.29	ns
Neg. Dispositional Total	15.14	2.67	12.86	2.79	2.40	.023

For the narrative question ("What did you think of the narrative you heard?"), responses were coded along the dimension of valence (positive, neutral, or negative), realism (mentioned, absent, or discredited), and spontaneous themes that emerged from the data. Of the 21 responses, 1 (4.76%) was negative ("it sucked."), 19 (90.47%) were positive ("I thought it was a really good story," "it was awesome…I liked it.") and 1 (4.76%) was neutral ("it was alright I guess."). Therefore, a clear pattern emerged indicating that participants enjoyed the narratives. In terms of realism, 10 (52.38%) of the responses spontaneously used words describing elements of realism in the narrative (i.e. "vivid," "like real life," "it sucked me in", etc.), while 11 did not have any mention of realism components (47.61%) (i.e. a response that simply read "it was great" was coded as "absent" for any realism dimensions). No responses discredited the story.

One spontaneous theme did emerge regarding the narratives. We define a theme as a

clear sentiment repeated across at least three (approximately 15%) separate responses. In this case, a theme emerged which we labeled "views of research." 7 individuals (33.33%) compared the narrative (positively) to other research or schemas of research, reporting things like: "I liked it. This is less boring than most of the research you do" or "good...this study is better than the other one I did. I actually liked this." Overall, this theme seemed to suggest that participants had either experienced or had ideas of research as "boring," not engaging, and uninteresting.

Qualitative data on the interviewee was analyzed along the dimension of valence (positive, negative, neutral) as well as empathy (present, not mentioned, or reversed), as well as spontaneous themes. Again, responses toward the target individual were primarily positive in nature, with 16 of the 20 (80%) responses positive ("She was pretty interesting"), 2 (10%) negative ("this girl has issues!", and 2 (10%) neutral ("ok."). 15 (75%) responses spontaneously mentioned empathy, which we defined as an emotional reaction of concern toward the character ("i.e. I felt really bad for her."), 4 (25%) were absent in empathy-related information, and 1 (5%) was directly anti-empathy ("She did it to herself!").

Two interesting themes also emerged from the data: "reference to others" and "downward comparison." In the first, 9 (45%) responses spontaneously connected the interviewee to a person they knew in real life or in movies (i.e. "my friend's dad has bipolar disorder" or "it was like that movie about the crazy math guy"). While one of these comparisons was negative ("ugh! like my ex... too freakin' emotional and wants everyone to focus on her problems..."), these comparisons bode well for the realism of the narrative and

the relatability of the interviewee, since the participants were spontaneously drawing connections to real-life experiences. In the second theme, 6 (30%) responses mentioned that they felt better or more grateful about their own life after hearing about the interviewee's life (i.e.: "I thought I had problems! This girl has it much worse" and "It makes me feel a little better about my own problems to know she can graduate with all this"). 5 of these 6 (83.33%) responses were found in participants who heard the AIDs narrative, suggesting this character especially elicited downward comparison reactions.

In terms of the closed-ended measures, average ratings for both narratives on realism fell well above the mid point of the 7-point Likert scale ($M = 6.1$ and 5.89, $SD = 1.23$ and 1.19), echoing the information gleaned from the qualitative data. Similarly, participants found both interviewees to be "very easy" to relate to ($M = 5.71$ and 6.2, $SD = 1.05$). A t-test revealed no significant difference between the two groups in perceptions of narrative realism ($t = -.06$, $df = 28$, $p = .96$) or relatability of the interviewees themselves ($t = -.129$, $df = 28$, $p = .89$).

Pilot Study: Discussion

Overall, participants reported that the narratives were believable and that the individuals were realistic. While the person with HIV was generally less stigmatized (in terms of social distance) than the individual with Bipolar Disorder, this is to be expected based on previous research regarding the differential prejudice toward mental and physical illnesses, including AIDS (Corrigan, River, Lundin, Wasowski, Campion, Mathisen, et. al. (1999). Attributions about the positive and negative events were normally distributed and with

sufficient variability. Furthermore, the levels of empathy reported were similar to those found by previous studies. Based on this information, no changes were made to the stimulus materials; the narratives were judged to be appropriate for use in the main project.

However, a change was made in the dependent measures. Because participants' responses on the open-ended attribution questions were inconsistent in quality, it was decided that these items (which asked for up to 5 reasons for each of the 6 events) were too cumbersome and unreliable for the present study. Given the fact that most research in the field uses only the closed-ended measure, and given the unreliable results of the pilot study, the open-ended attribution questions were cut from the main project in the spirit of parsimony.

The unreliability of the qualitative responses may raise the question of whether the overall dataset is plagued incomplete or unreliable reports. However, because participants seemed to give appropriate responses on other open-ended items (i.e. perceptions of the narrator) and did not have an unusual amount of missing quantitative data, this suggests that the problem lies not with overall participant responses but was unique to that particularly cumbersome open-ended measure. We therefore decided to proceed with the main study and simply omit this problematic measure.

Main Study

Main Study: Overview

The main study follows a 3x2x2 mixed factorial design, with two independent

variables, the first (perspective-taking, between-participants) having three levels (perspective-taking condition, objective, and no instruction), the second (valence of events, within-participants) having two levels (positive or negative), and the third (target stigma, between-participants) having two levels (bipolar or HIV). Dependent variables consist of measures of empathy, attributions, mental illness stigma, and relevant personality traits.

Again, the goals of the study are twofold: to determine if perspective-taking will reduce stigma toward mental illness, and to explore the theoretical mechanisms underlying this process (specifically, empathy, self-other overlap, and attributions). We hypothesized that the intervention would reduce stigma toward the target individuals and that this would generalize to the larger group, at least partially. We also anticipated that the intervention would increase empathy and self-other overlap toward the target individual, as well as alter attributions. Regarding the specific pattern of attributional changes we might find, a self-serving bias pattern would presumably support Galinksy's theory, whereas a more unilateral situational pattern would support reasoning derived from Vescio's work about reversing the fundamental attribution error. Specific hypotheses were not made regarding which mechanisms would mediate the relationship between perspective-taking and decreased stigma, as all three variables have been previously implicated.

Main Study: Participants

185 participants were recruited from undergraduate psychology courses at the University of Tennessee. As in the pilot study, after reading and signing the consent form

participants were told that they would be listening to an interview of a graduating senior describing their "high points" and "low points" at UT. Participants were also informed that this study was about "perceptions of personal narratives" rather than prejudice per se, so as to decrease social desirability effects that may arise when participants know their prejudice is being measured. Again, the demographics of the sample mirrored that of the University, with 97 females, 88 males, 92% White, 6% African-American, 2% Other, and an average age of 19.3

Main Study: Procedure

Participants were run in groups of 7-8 individuals per session. Each group was randomly assigned to one of 3 conditions: "perspective-taking," "objective control," or "no instruction." This latter option was included to see what participants would naturally do when presented with vivid narratives.

The three conditions differed only in the instructions they received before hearing the narrative. Participants in the perspective-taking condition were instructed: "As you listen to the following interview, we would like you to try and imagine the world from the speaker's point of view, as if you are looking out through their eyes. What is the person feeling and thinking, what is their experience like from their point of view?" Participants in the objective control condition were told: "As you listen to this story, we would like you to take an objective stance. Please pay close attention to the details of the person's narrative— what are the events, when do they occur, and how do the individuals describe them? Try to remember these details, as if you might recount them to a reporter." Those in the no instructions

condition were simply told to listen to the narrative.

After receiving the relevant instructions, participants listened to the stimulus materials (previously pilot-tested) on headphones at their computer station. Half in each condition were randomly chosen to hear the narrative about Bipolar Disorder while half heard the individual with HIV.

After listening to the narrative, participants completed a number of dependent measures (described in detail below, according to order presented in the study).

Main Study: Dependent Measures

Before coming into the laboratory, participants completed a number of short measures online. First, they reported demographic information such as gender, age, year in school, fluency in English, and ethnicity. Participants were then prompted to complete a measure of Motivation to Control Prejudiced Reactions (MCPR), which was adopted for use with mental illness stigma by changing the word "black" or "African-American" to "people with mental illness." This measure was completed on-line using the web-based system. This 17-item scale inquires as to whether it is important for the respondent to try not to appear or be prejudiced (see Appendix F). Responses are made on 5-point (disagree... agree) scales. This questionnaire has been used repeatedly in previous research as a means of assessing individuals' values and beliefs about whether they feel it is acceptable to be prejudiced (Olson & Fazio, 2009). This measure does not measure prejudice itself, and is included in the study only as a possible control variable, to indicate whether a given individual is likely to be minimizing their

prejudice on later measures.

Next, the web-based system prompted participants to complete the Interpersonal Reactivity Index (Davis, 1980). This 28-item scale (Appendix G) assesses participants' dispositional tendency to engage in perspective-taking. Responses are made using a 5-point rating scale ranging from "does not describe me well" to "describes me very well." This measure is well-validated and has been used to measure one's general ability to perspective-take among multiple age groups, genders, and ethnicities.

After listening to the narratives in the lab, participants first completed measures tapping potential mediator variables: Batson's empathy questionnaire, the close-ended attributions measure, and Galinsky's self-other overlap item.

As in the pilot study, participants completed Batson's self-report empathy scale (Appendix C), which asks participants rate (on a 7-point Likert scale ranging from 1, "not at all," to 7 "very much so") the degree to which they experienced various emotions (i.e. warm, disturbed) toward the target individual (Batson, Batson, Slingsby, Harrell, et al, 1991).

Next, participants completed the traditional attribution measure adapted from Vescio and Biernat (1999) (Appendix D), rating on two different scales (from 1 to 7) how much they felt "dispositional factors" and "situational factors" were the cause of the various events in the narrative.

The self-other overlap item administered was one developed by Aron & Fraley (1999) and used by Galinsky and colleagues (2005), wherein participants are asked to report how much they feel they overlap with the target individual, using Venn diagrams of "self" and

"other" as visual aids (Appendix H). This can range from 0% ("we have nothing in common at all") to 100% ("we are practically the same person").

Next, participants completed two important outcome measures tapping social stigma toward the individual. First, social distance was again measured with a well-validated social distance scale (Appendix D) used in previous research (Mann & Himelein, 2004) in which participants report how likely or unlikely (on a 7-point Likert scale) they would be engaging in a number of social activities with the target individuals, such as dating or working together.

To tap behavioral intentions toward the individual (another measure of prejudice), participants were asked if they would like to sign up to participate in a follow-up project (for research credit) where they would meet the individual from the interview and discuss key aspects of their life. The project would take approximately 1 hour, and researchers would be interested, again, in the construction and elaboration of personal narratives. Presumably, participants' willingness or unwillingness to meet the individual in the narrative is a reflection of their attitudes toward that person.

Participants then completed a number of personal measures to assess constructs that could potentially influence perspective-taking and stigma. These include: the Rosenberg (1965) trait self-esteem scale (Appendix I) as well as questions assessing participants' history of mental illness, therapy involvement, or medication (Appendix J). The purpose of including these questionnaires is to be able to determine, in the final analysis, whether perspective-taking accounts for any change in attitudes above and beyond these variables, or whether certain variables— such as self-esteem— mediate the relationship between perspective-taking

and reduced prejudice. In other words, it is possible that perspective-taking may lead to overall improved attitudes, but not among a subset of the population— for example, those with low self-esteem or without any previous experience with mental illness.

Next, participants were told they were being asked to fill out a few questionnaires as part of a separate (fictional) study about "campus organizations". This slight deception was employed to further obscure the fact that we are studying mental illness stigma, and thereby minimize the well-known the effects of social desirability. In this "campus organizations" study, participants were presented with a behavioral intentions task and a feeling thermometer.

The behavioral intentions measure consisted of the typical "allocation of funds" premise used to elicit behavioral intentions toward the group (Appendix K). In this seemingly unrelated task, participants are told the university must cut the budgets of a number of student groups (a realistic premise in these economic times) and are seeking their opinions on which groups should receive more or less funding. Embedded within this larger list are the two target organizations— one related to mental illness and one related to AIDS. Presumably, the amount of money participants allocate to various organizations is a reflection of their attitudes toward those groups.

The final stigma measure was a "feeling thermometer" (Appendix L), a commonly used measure in attitudes research used to assess global feelings toward a number of groups. Participants are asked to indicate their feelings on a scale of 0 degrees (very much dislike) to 100 degrees (very much like) a number of social groups (i.e. lawyers, Blacks, Muslims, and— in

our study— individuals with AIDS and mental illness).

Following the experiment, all participants were formally debriefed and their questions were answered.

Results

Stigma Outcomes

To examine the first question of whether perspective-taking interventions can affect stigma toward mental illness, we conducted a one-way ANOVA comparing the means for three conditions (perspective-taking, objective control, and no instructions), on each of the stigma measures. These analyses included only half of the participants, specifically those who heard the bipolar narrative.

For the social distance measure, results showed a significant difference between the three groups, $F(2,90) = 51.21$, $< .01$) in the expected direction, with the perspective-taking group reporting the least social stigma (higher scores = greater comfort) ($M = 31.918$, $SD = 4.657$), the objective control condition showing the most stigma ($M = 22.571$, $SD = 3.963$), and the no instruction group in the middle ($M = 28.611$, $SD = 4.017$) (see Figure 2). Post-hoc t-tests comparing the groups found significant differences between each condition: perspective-taking and objective, $t(70) = 10.096$,

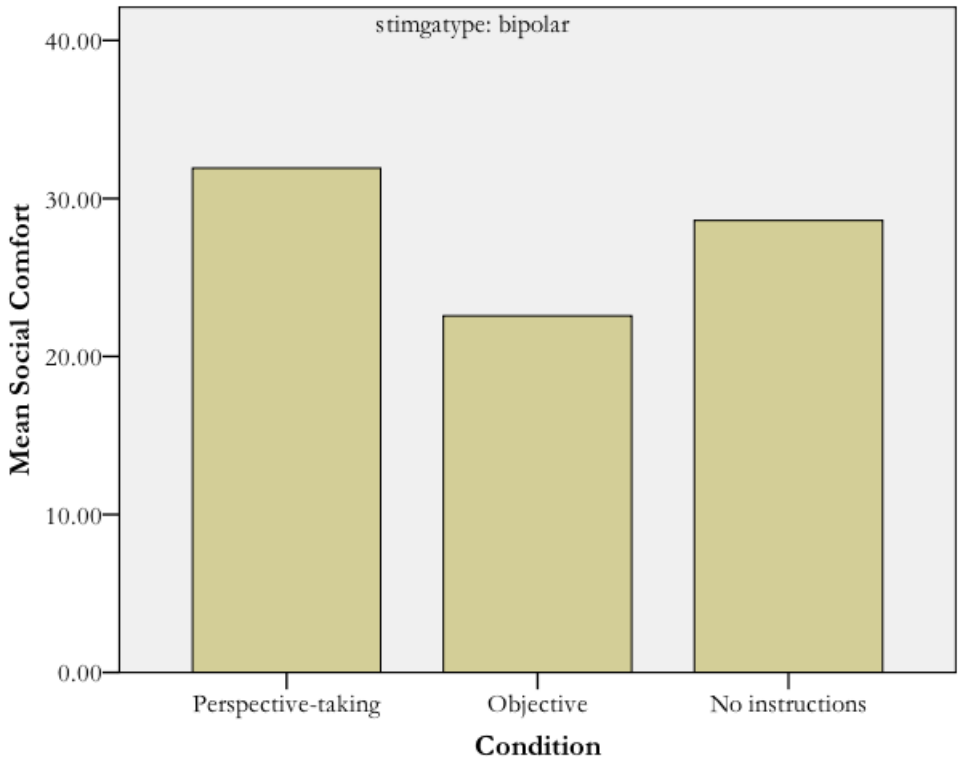


Figure 2. Social Comfort by Condition for Bipolar Stigma

(higher numbers= less prejudice)

$<.001$, perspective-taking and no instructions, $t(53) = 2.58$, $<.01$, and objective and no instructions,

$t(51) = -6.213$, $<.001$.

For the behavioral intentions toward the group measure (i.e. "budget cuts task") an index was created by comparing the average budget cuts wished upon the other 14 groups divided by the budget cuts wished upon the Mental Illness Awareness Coalition. In the final ratio, higher numbers indicate relatively *more* money left for the group budgets and thus less prejudice. A one-way ANOVA revealed a significant difference between the three conditions,

F(2,89) =7.511, <001, again in the expected direction, with the perspective-taking group having the highest ratios (M=1.678, SD=.67), the objective control group having the lowest ratios (M=1.248, SD=.70), and the no instructions condition falling somewhere in the middle (M=1.482, SD=.62) (See Figure 3). Post-hoc t-tests revealed a significant difference between the perspective-taking and the objective conditions, t(70)=2.646, <.01, whereas contrasts between the other groups were non-significant (t's< 1).

A similar ratio was created to analyze the feeling thermometer: Average ratings toward all groups was divided by the rating toward "mentally ill people." Analyses revealed no significant difference between the three conditions (F(2,89)=.267, p=.76).

The behavioral intentions measure toward the individual (i.e. whether participants were willing to participate in a follow-up study where they met the students from the narratives) did not yield significant results (F(2,89)=.612, p=.54). Closer examination reveals that this non-significant finding may be due to a "ceiling effect" wherein almost all participants reported they were willing to be contacted for the other study. The scale ranged from -2 (not interested at all) to +2 (very interested), and means for all three groups were near the high end of the scale (M=1.66, 1.5, 1.48) with low standard deviations (SD=.2, .35, .44). It appears students were either very interested in

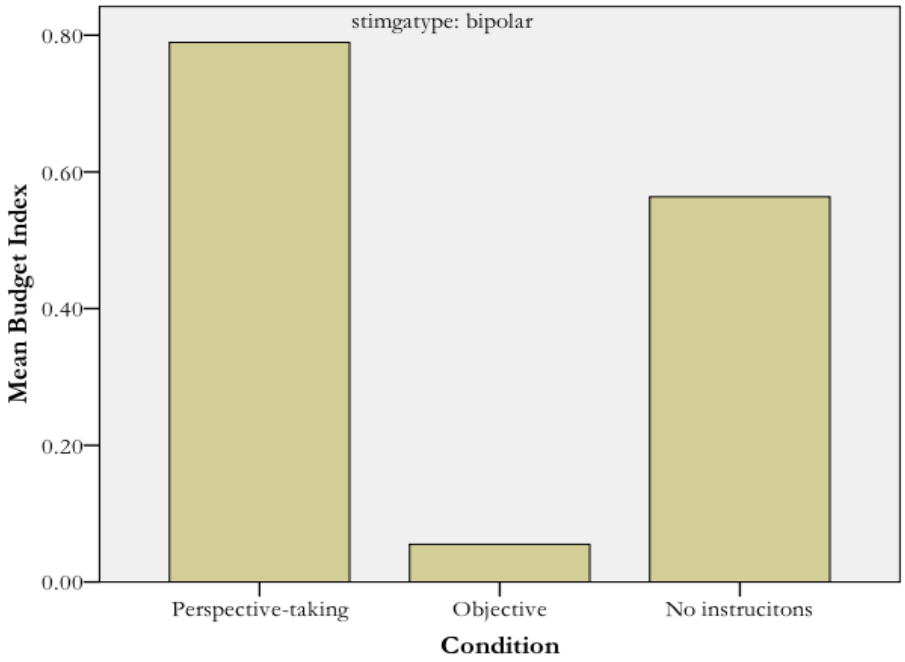


Figure 3. Mean Budget Allotments Toward Campus Mental Illness Group by Condition (higher numbers=less prejudice)

helping the cause of research or— more likely— in gaining more research credits for class, thereby

washing out any attitudinal effects of the measure.

Main effects of condition on AIDS stigma followed nearly identical patterns, with significant differences found in the expected direction for the social distance measure ($df=2$, $F= 35.420$, $p=<.001$) and behavioral intentions toward group ($df=2$, $F=5.56$, $p=.005$), but not in behavioral intentions toward the individual. However, unlike the bipolar condition, the AIDS condition showed a marginally significant effect for the feeling thermometer, $F(2,85)= 3.075$, $p=.051$), in the expected direction with the perspective-taking group

reporting the most positive feelings toward persons with AIDS.

AIDS vs. Bipolar Comparisons

Since the intervention also had an effect on stigma toward both AIDS and bipolar disorder, it may be of interest to examine if the effects differed in magnitude between the two groups.

First, as expected, participants in the bipolar condition reported significantly greater stigma (less social comfort) ($M = 27.622$, $SD = 5.754$ toward the bipolar individual than those in the AIDS condition did toward the HIV positive individual ($M = 33.294$, $SD = 6.391$) ($df = 2$, $F = 28.446$, $p < .001$) (see Figure 4). This pattern remained when all three conditions were analyzed separately (all p's $< .01$, indicating a very uniform difference in higher stigma toward bipolar vs. HIV. Group prejudice (in the form of budget cuts) did not differ, however, between AIDS and mental illness ($F < 2.5$, $p > .1$).

To determine if the impact of the intervention on social distance differed as a function of stigma type (AIDS vs. bipolar), we ran a 2 (Stigma type: Bipolar vs. AIDS) X 3 (Condition: Perspetive-taking vs. Objective vs. No instruction) ANOVA testing for interaction effects on social

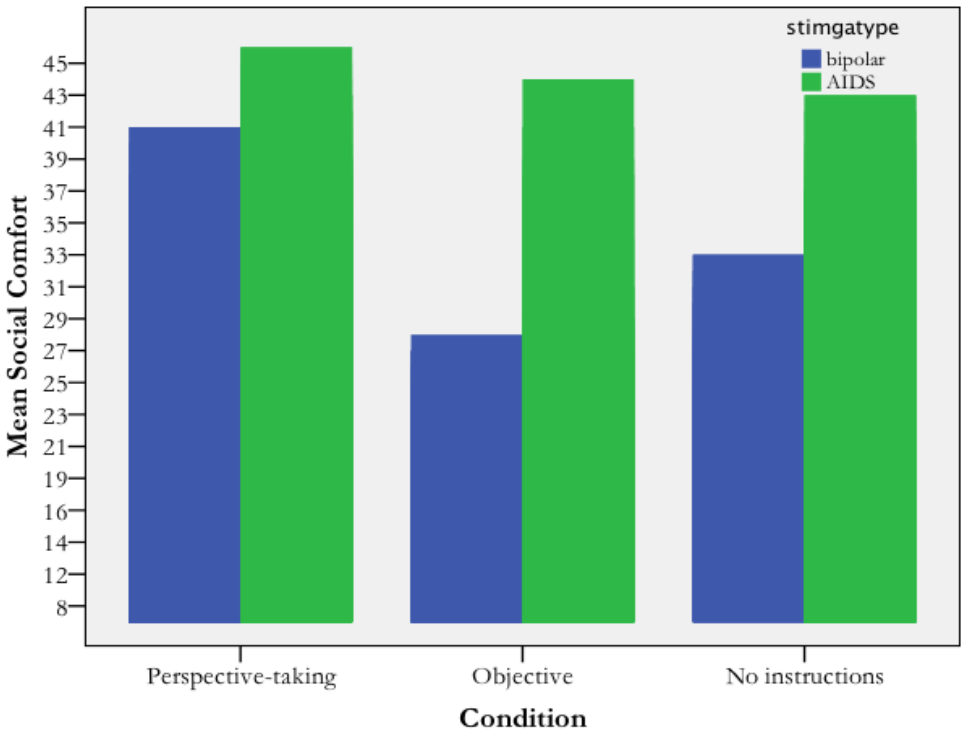


Figure 4. Comparison of Social Comfort towards AIDS vs. Bipolar

distance. The interaction effect was non-significant (df = 2, F = 2.460, p = .08); yet, it may be relevant to note that p approached significance. Closer inspection of the differences between means reveals a

weak trend toward the intervention having stronger effects on reducing social distance toward bipolar, perhaps because stigma was greater toward bipolar and the AIDS condition had a slightly "ceiling effect". However, since the interaction term was non-significant, we chose to analyze the data as a whole when addressing theoretical questions, as it does appear that the intervention has similar effects regardless of stigma type.

Theoretical Mechanisms: Main Effects on Attributions, Empathy, & Self-Other Overlap

Before testing for mediation we first needed to determine whether there were main effects on these potential mediators. The intervention had the expected effect of increasing reported empathy toward the target individual, $F(2, 185) = 7.756, < .001$), with the perspective-taking group reporting the most empathy ($M = 4.14$, $SD = 1.102$), the objective group reporting the least empathy ($M = 3.43$, $SD = 1.147$), and the no instructions group again falling in the middle ($M = 3.98$, $SD = .962$) (see Figure 5). Post-hoc t-tests indicated the difference between the perspective-taking and objective condition was significant, $t(133) = 3.676, < .001$, as well as between the objective and no instructions conditions, $t(113) = -2.701, < .01$). However, there was no significant difference between the perspective-taking and no instructions condition on empathy, $t(118) = .865$, $p = .389$).

The intervention also had a significant effect on self-other overlap, $F(2,185) = 4.73, < .01$, with the perspective-taking group reporting the highest self-other overlap ($M = 30.424$), the objective condition reporting the least ($M = 20.678$), and the no instructions condition in the middle ($M = 23.15$) (see Figure 6). Post-hoc t-tests revealed a significant difference between the perspective-taking and no instructions condition, $t(109) = 2.051, < .05$, and between the perspective-taking and objective conditions, $t(123) = 2.900, < .005$). However, the difference between the objective and no instructions conditions was not significant, $t(102) = .697$, $p = .487$).

To make sense of the attribution data, composite scores were calculated from the 12 items, yielding four meaningful variables: 1) situational attributions for positive events; 2) situational attributions for negative events; 3) dispositional attributions for positive events;

and 4) dispositional attributions for negative events.

Recall that our basic hypothesis was that the intervention would impact attributions. Specifically, Galinsky's theory of self-bias should predict a 3-way interaction between valence, condition, and attributional direction, whereas Vescio's straight attributional theory would be better reflected in a 2-way interaction between attributional direction and condition only (with no emphasis on valence). Specifically, Galinsky's self-other overlap theory would predict increased dispositional

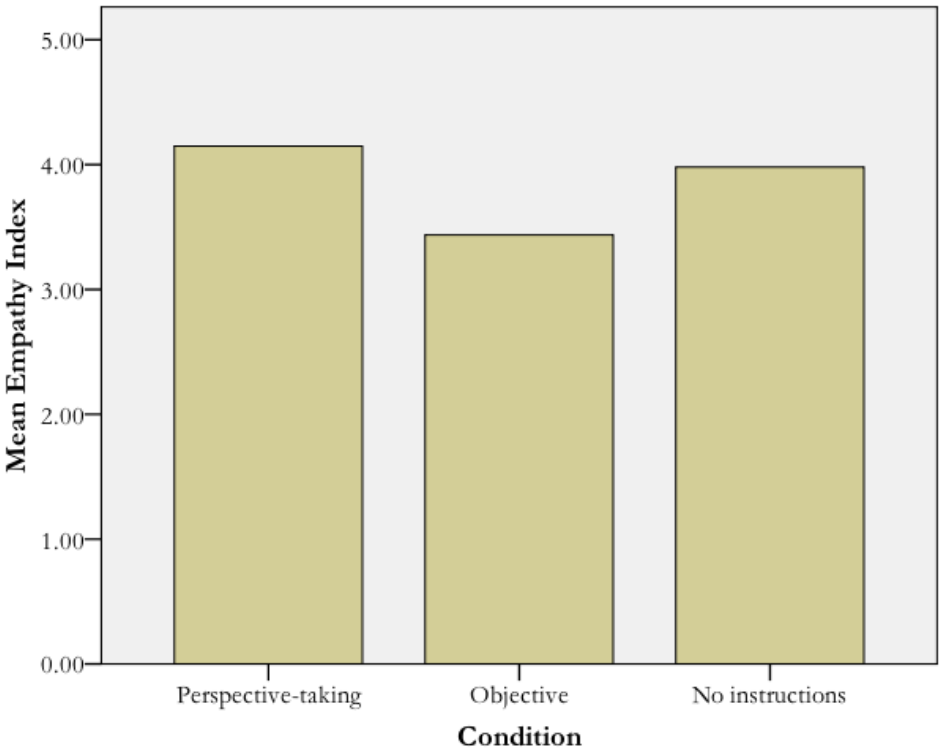


Figure 5. Empathy Index by Condition

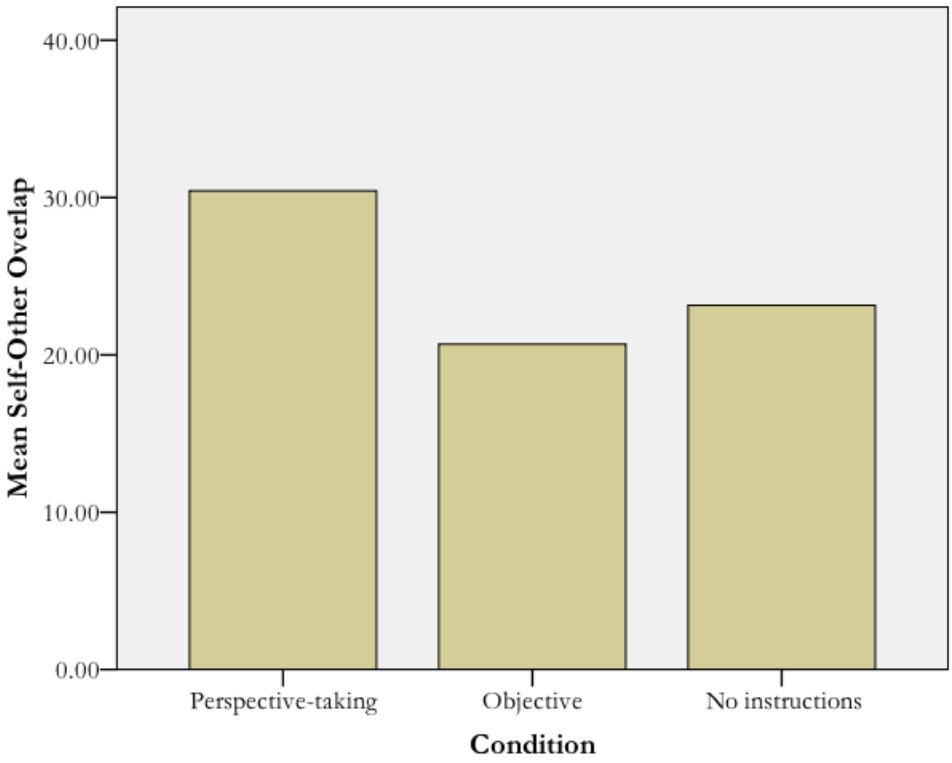


Figure 6. Self-Other Overlap by Condition

attributions about positive events and decreased dispositional attributions for negative events (and

presumably the corresponding rise in situational attributions for these events). In contrast, Vescio's attributional theory would predict increased situational attributions for both positive and negative events (and the subsequent decrease in dispositional attributions).

We proceeded to test the divergent hypotheses of self-bias vs. situational bias by running a 2 (Valence: Positive vs. Negative) X 2 (Direction: Situational vs. Dispositional) ANOVA; the between-subjects factor in this model was condition. Analyses revealed that the 2 way interaction between condition and direction (relevant to Vescio's model) was not

significant, F (2,185)=2.000, p=.099, although it did suggest a trend. The 3 way interaction (relevant to Galinsky's model), on the other hand, was significant, F(2,185)=7.692, <001) in the expected direction (see Figure 7).

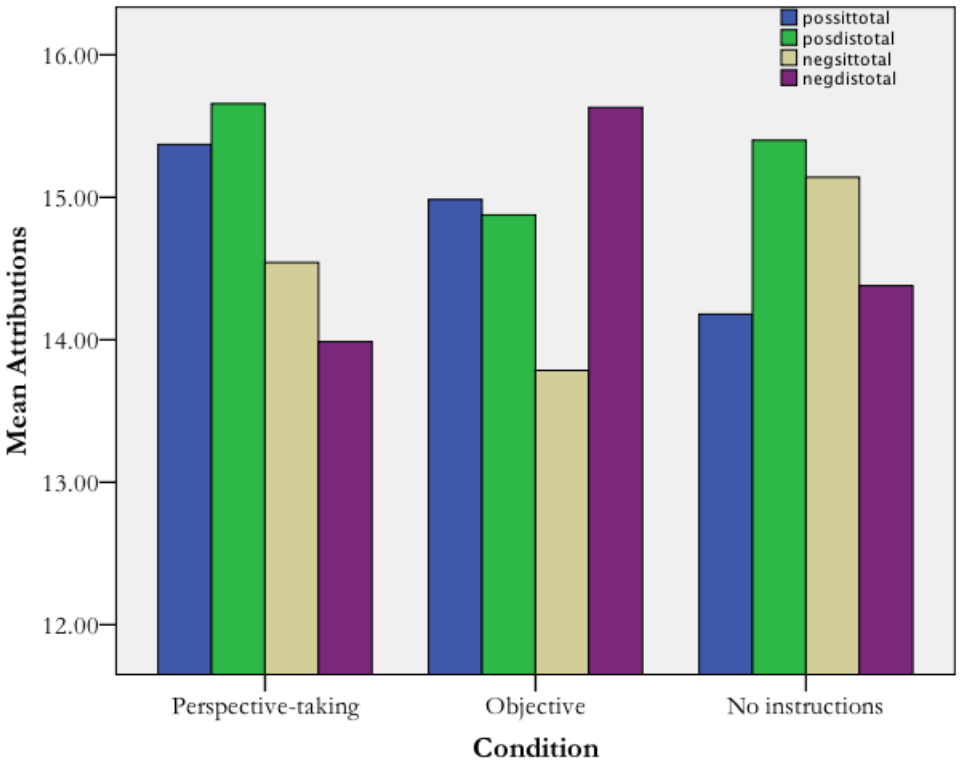


Figure 7. Attributional Means by Condition

In the effort of conceptual parsimony, we organized the four attributional variables according to the theoretical question of a "self-bias" pattern or a "situational" pattern. This reorganization does not alter the results, but rather presents an alternative (and, we believe, more simple) means of understanding the data. Thus, a self-bias index was created for each individual consisting of: {dispositional attributions for positive events + situational attributions for negative events}/{situational attributions for positive events + dispositional

attributions for negative events}. Similarly, a situational index was calculated using the following formula: {situational attributions for positive events + situational attributions for negative events}/ {dispositional attributions for positive events + dispositional attributions for negative events}. On both indexes, higher ratios indicate greater bias, either situational across the board of "self-like" in nature.

Using these indexes, the pattern of situational bias again shows a trend but no significant effects. The pattern of self-bias, however, is very clear (see Figure 8), with the perspective-taking and no-instruction groups showing a positive trend (M= .842, SD=4.11 & M=1.980, SD=4.32, respectively) while the objective condition actually showed a reverse pattern with a negative self-bias index (M= -1.950, SD=4.08). It is interesting to note that this the first variable on which the no instruction condition appears to be showing greater effects than the perspective-taking group. A Tukey's HSD pos-hoc comparison was calculated to determine if this difference was significant. Data revealed that it was not (p=.56).

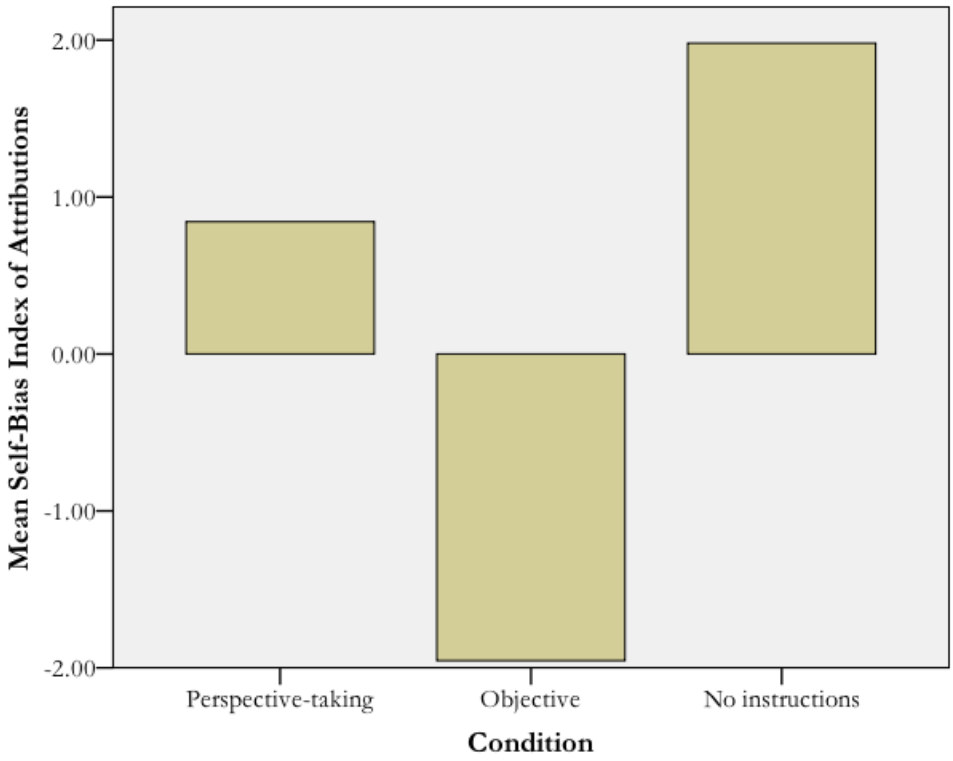


Figure 8. Self-Bias Index of Attributions by Condition

We decomposed the 3-way interaction by first testing main effects of condition on the four attributional variables. Of these, dispositional attributions about negative events (sometimes known as "blaming attributions") emerged as a significant effect, $F(2,185) = 4.457$, $p < .05$, and situational attributions about those same negative events proved marginally significant, $F(2,185) = 2.649$, $p = .073$. Dispositional and situational attributions about positive events did not significantly differ between the groups, suggesting that the "action" within the attribution measure appears to center around participants making less blaming attributions about negative events. In other words, the differences shown on the ANOVA are being driven primarily by attributions surrounding negative events, not positive events.

Given this information, a new variable: "blaming index" was created (for use in future

attributional analyses) by subtracting the situational attributions about negative events from the dispositional attributions about negative events, such that higher scores indicate a more "blaming" pattern (see Figure 9).

Examining Covariates

Thus, analyses reveals significant effects of the intervention on many of the key variables: stigma (i.e. social distance, behavioral intentions toward the group), attributions (specifically in a self-like pattern), empathy, and self-other overlap. Yet, it is possible that these effects may disappear when demographic and personality variables are accounted for.

ANCOVAs (anlysis of covariance) were run to establish if these effects were above and beyond the impact of demographic variables. In the first analysis, condition was entered as the IV and attributions, empathy, and self-other overlap were the DVs; race, age, and gender were the covariates. Results indicated that these demographic variables had no significant impact on the relationship between condition and any of the potential mediators (all $Fs < 1.5$). A second analysis was run to test the potential effects of the demographic variables as covariates in the relationship between condition (IV) and the outcome measures of social distance and behavioral intentions toward the group (DVs). Again, no significant predictors were found (all $Fs < 1.5$), indicating that the effects of condition on these variables were indeed robust, above and beyond any demographic predictors.

A second series of ANCOVAs was conducted for the control variables collected in the lab. Effect of condition on stigma, attributions, empathy, and self-other overlap remained significant when the following factors were entered as simultaneous covariates: self-esteem,

self-reported mental illness, knowing a friend with mental illness, knowing a family member with mental illness, and attending therapy. However, a few covariates showed a significant impact. Specifically, self-esteem accounted for a significant amount of the variance in empathy,

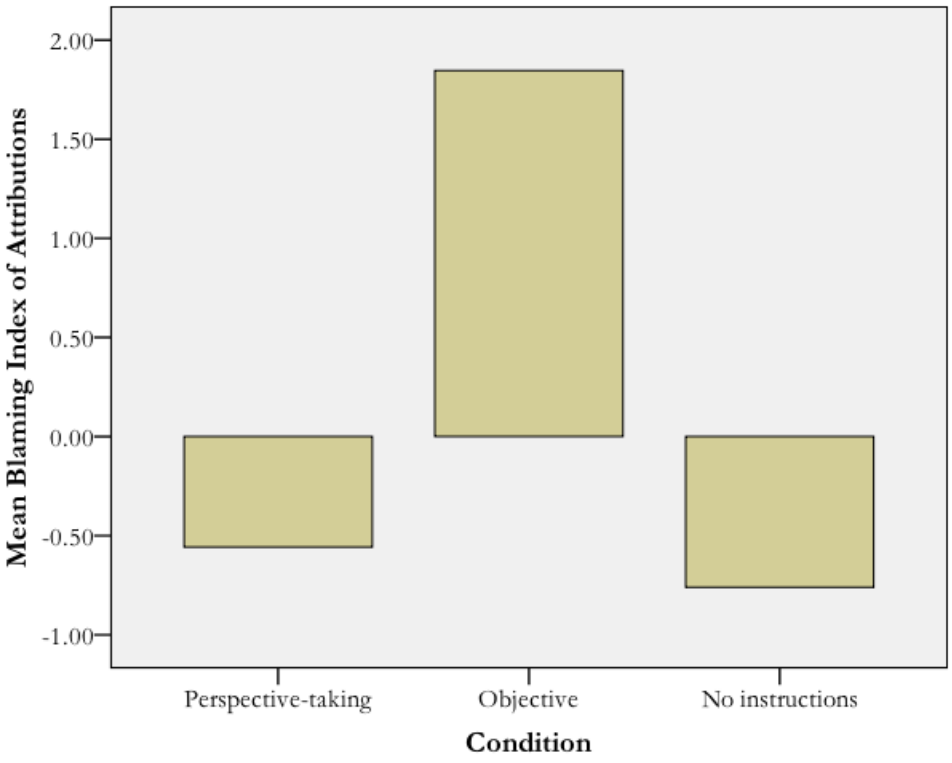


Figure 9. Blaming Index of Attributions by Condition

$F(1,185) = 5.020$, $p = .026$, with participants higher in self-esteem reporting greater empathy. Therapy experience significantly impacted behavioral intentions toward the group, $F(1,185) = 6.135$, $p = .014$, as well as the self-bias index of attributions $F(1,185) = 5.90$, $p = .016$, with participants who had therapy experience reporting more self-biased attributions and more positive behavioral intentions toward the group. However, in all three cases the relationship between condition and the outcome variables remained significant ($p < .01$),

suggesting a robust main effect despite the lesser (but occasionally significant) contributions of personality covariates.

Potential Moderators: Motivation to Control Prejudice, Perspective-Taking Orientation, & Self-Esteem

Two scales were administered prior to the intervention, which could potentially moderate the relationship between condition and the outcome variables— Davis's Interpersonal Reactivity Scale and the modified Motivation to Control Prejudice Scale. Specifically, Davis's Interpersonal Reactivity Scale (IPS) taps participants' natural orientation toward or against assuming the perspective of others. It was theorized, then, that participants higher in this orientation would be more likely to benefit from the intervention whereas those low in this quality would be less impacted the intervention.

Motivation to Control Prejudice has been associated with more positive judgments of targets of stigma (Olson & Fazio, 2004), but it is unclear how this scale would interact with the effects of an intervention. Presumably, those higher in motivation to control prejudice might be more open to interventions aimed at decreasing it and thus have greater results.

The Interpersonal Reactivity Scale contains four subscales: fantasy, empathy, perspective-taking, and distress (Davis, 1983). However, in our study two of the subscales had insufficient alphas to be considered reliable— distress (6 items, a=.167) and fantasy (6 items, a=.63). Therefore, all subsequent analyses used only the two reliable scales of empathy (7 items, a= .881) and perspective-taking (8 items, a= .89), Overall, Davis's IPRS was

hypothesized lead to stronger effects of the perspective-taking intervention, but no specific predictions were made regarding unique impact of the subscales on group or individual prejudice.

For all moderation analyses, the "no instructions" condition was omitted from the dataset for practical and theoretical reasons (i.e. predictions regarding moderation from previous studies did not include the "no instructions" group, thus no specific hypotheses applied to this condition). Therefore, we compared only the perspective-taking and objective groups. First, we computed the interaction terms (condition x perspective-taking subscale and condition x empathy subscale). We then ran hierarchical linear regression equations with the IVs as condition, the perspective-taking (or empathy) subscale, with the corresponding interaction term entered on a subsequent step.

When the DV was social distance, the perspective-taking subscale showed no main effects or interaction with social distance (all $ts < .5$). In contrast, there was a main effect for the empathy subscale ($B = .18$, $t = 2.871$, $p = .005$), but no significant interaction ($t < 1.5$). To explore this main effect further, we examined correlations between the empathy subscale and social distance, by condition. All three conditions showed positive correlations (indicating greater empathic orientation leads to greater social comfort), but only the correlation in the objective condition reached significance ($r = .304$, $p = .014$).

When group prejudice (in the form of budget cuts) was entered as the DV, there was a trend toward a main effect for the empathy subscale ($B = -.127$, $t = -2.594$, $p = .113$), and a marginal interaction term ($B = -.548$, $t = -1.816$, $p = .07$). Decomposing these effects, the

empathy subscale showed no relationship with group prejudice for the perspective-taking condition, but showed a significant effect on group prejudice for the objective condition (r=2.63, .034), with greater empathic orientation leading to less group prejudice.

When group prejudice was the DV, there was also a significant main effect for the perspective-taking subscale (B= -.516, t= -2.137, p=.03) and a significant interaction (B= 1.329, t 3.024, p=.001), suggesting clear moderation. Again, the main effect appears to be driven entirely by the objective condition (r=.527, p= <.001), as there was no significant correlation in the perspective-taking condition (see Figure 10).

The second potential moderator variable, Motivation to Control Prejudice (MCPR), showed good reliability (a= .858) when item 4 was deleted and reverse-score items were corrected. Research

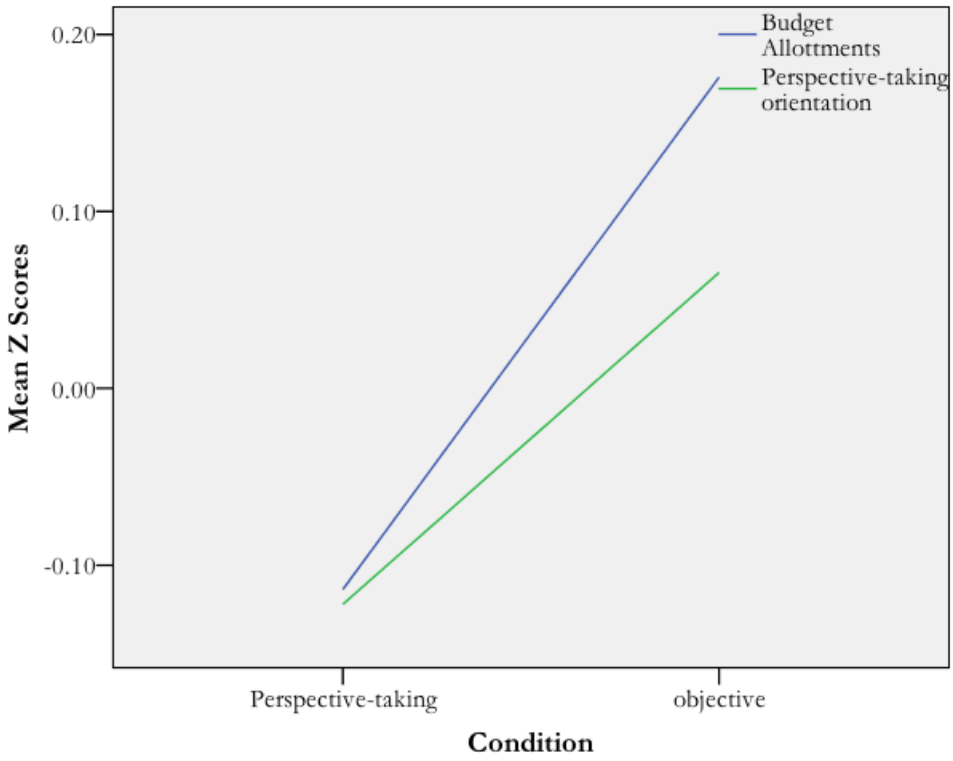


Figure 10. Relationship of Perspective-Taking and Budget Allotments by Condition (higher values=less prejudice in budget allotment index)

conducted by the scale authors (Duntan & Fazio, 1997) indicates the MCPR contains two subscales: concern with acting prejudiced (CAP) and restraint to avoid dispute (RAD). Both subscales emerged from our data, with strong reliability for each scale (a=.835, a=.809).

In testing moderation, we first ran regression equations with the IVs as condition, CAP subscale total, and the interaction term entered on a second step. When social distance was used the DV, there was no main effect for the CAP subscale, but the interaction term was significant (B=-.652, t=-3.346, p=.001, indicating that Concern for Acting Prejudiced does moderate the relationship between condition and social distance.

To decompose this interaction, we examined correlations between CAP and social distance for the two conditions. CAP had the hypothesized effect in the perspective-taking group, leading to less social distance ($r = .290$, $p = .015$). Yet the reverse occurred in the objective condition, with participants higher in Concern for Acting Prejudiced actually showing greater social distance ($r = -.272$, $p = .02$). Given this clear reversed pattern, we examined the correlations for the "no instruction" group, and found that they mirrored the perspective-taking condition ($r = .225$, $p = .117$), suggesting that the oddity lies with the objective condition.

The regression testing moderation effects of the Restraint to Avoid Dispute (RAD) subscale on social distance showed no main effect or interaction (all $t < .5$). Similarly, when the DV entered was group prejudice (in the form of budget cuts), there was no significant main effects or moderation for the CAP or RAD subscales (all $ts < .5$).

Finally, we examined the role of self-esteem in moderating the relationship between self-other overlap and reduced prejudice in the perspective-taking condition. A regression was run with self-other overlap, self esteem, and the interaction term as the IVs entered on a second step, and social distance as the DV. Results indicated no main effect for self-esteem and no interaction (all $ts < 1$). Similar results occurred when moderation was tested in the objective and "no instructions" conditions as well. Furthermore, when group prejudice (via budget cuts) was the DV, there were no main effects or moderation effects in any of the three conditions (all $ts < 1$).

Potential Mediators: Empathy, Self-Other Overlap, Blaming Attributions

Hypotheses regarding mediational mechanisms were tested using structural equation modeling (SEM) in AMOS. Full information maximum likelihood estimation (FIML) was used to accommodate missing data because this method has been found to be more stringent and efficient than other techniques (Arbuckle, 1996).

Because the "no instruction" group mirrored the perspective-taking condition for most variables and post-hoc tests revealed no significant differences between the two groups on the 2 of the 3 mediator variables (self-other overlap being the exception), these conditions were combined in our final model and compared against the objective group to maximize power. Thus, the independent variable in all mediation models was perspective-taking (either present or absent). Potential mediating variables were: empathy, self-other overlap, and the blaming index. The latter variable was chosen over other attributional variables (i.e. self index, situation index, or raw values) because it summarized the primary action in the data, which occurred around dispositional attributes of negative events. Two path models were run— the first with an outcome variable of individual prejudice (i.e. social distance), the second with an outcome variable of group prejudice (i.e. budget cuts).

Figure 11 shows the individual prejudice model (Model 1) with standardized regression weights for each path. Because the three mediators were related to each other, it was important to include in our model bidirectonal pathways from the error terms of these variables. We also included a direct path from the condition to the outcome variable because this provides the most stringent test of proposed mediation. This resulted in a fully saturated

model (i.e. a model that has zero degrees of freedom), which always fits perfectly to the data. For this reason, fit indices are not reported.

We tested for mediation using a three-step process, with indirect effects calculated using Sobel's test (Baron & Kenny, 1986); we chose to use Sobel because it is the most conservative and commonly reported means of testing for mediation. In Model 1, the path from condition to social distance stigma (C ') remained significant even after accounting for the other variables ($r = -.503$, $p < .001$) indicating that any mediation would be partial rather than full. For path A, results indicated a significant relationship between condition and all three of the potential mediators— empathy ($r = -.274$, $p < .001$), self-other overlap ($r = .193$, $p = .01$) and blaming index ($r = -.270$, $p < .001$). For path B, all potential mediators again demonstrated significant effects on social distance stigma (empathy: $r = .134$, $p = .01$; self-other overlap: $r = -.20$, $p < .001$; blaming index: $r = -.163$, $p = .004$).

Finally, indirect effects were calculated using Sobel's test, yielding a significant results for all three mediators (blaming index: $z = -2.32$, $p = .02$; self-other overlap: $z = -2.161$, $p = .03$; and empathy: $z = -2.01$, $p = .04$). Thus, results indicate that blaming attributions, self-other overlap, and empathy all partially mediate the relationship between perspective-taking and social distance stigma.

In the second path model (Figure 12), with group prejudice as the outcome variable, the paths between condition and all three mediators were again significant (empathy: $r = -.274$, $p < .0001$; self-other overlap: $r = -.181$, $p = .01$; blaming index: $r = .270$, $p < .0001$). In the second step, the paths from blaming index and self-other overlap to budget cuts were not significant

(blaming index: r=-.032, p=.657; self-other overlap: r=.132, p=.072), ruling out these variables as potential mediators.

Because the path between empathy and budget cuts was significant (r=-.186, p=.01), indirect effects

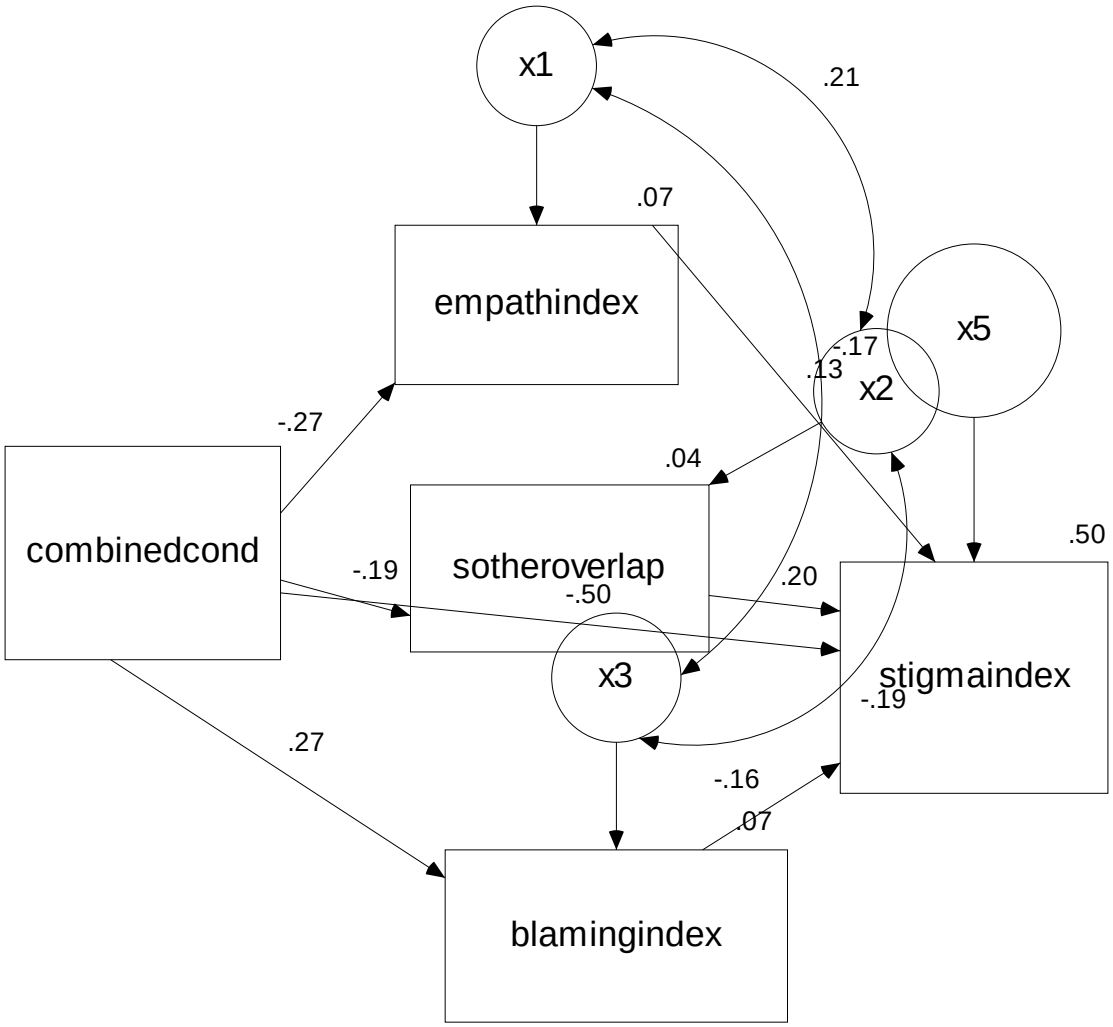


Figure 11: Mediational Path Diagram for Individual Prejudice

of empathy were tested using Sobel's method. Results indicated that empathy was a significant partial mediator ($z = 2.171$, $p = .03$) of the relationship between perspective-taking and group prejudice (in the form of budget cuts).

Finally, given that all three variables demonstrated significant effects and were frequently correlated with each other, we were curious as to whether one mediator predicted the others. Therefore, we conducted exploratory analyses in SEM by entering different model configurations and examining the model fit (via the chi-squared statistic) to determine which pattern best suited the data. Chi squared was chosen because it is the most basic of the model fit indices and served the rudimentary purpose of these exploratory analyses.

Before reporting these statistics it is important to note that such results are only tentative in nature. Because all three variables were measured at the same time and there is little theory to drive these path models (in terms of how the three mediators interact), the following analyses are not well-grounded in theory or design and are therefore presented only in the spirit of open curiosity, and as prompts for future exploration.

Unless noted otherwise, for the following models the direct path from condition to DV was left in, as were direct paths from condition to each mediator; different arrangements regarding between-mediator paths were then entered.

For the individual prejudice model (outcome variable = stigma), numerous path models were run wherein empathy was the "primary actor" upon self-other overlap and blaming attributions. In all configurations, the chi-squared statistic remained above 4.00, with p values $< .05$, indicating that there were significant differences between the model

predictions and the actual data (i.e. poor model fit). Furthermore, there was no difference in model fit when empathy was set to predict self-other overlap compared to when the two

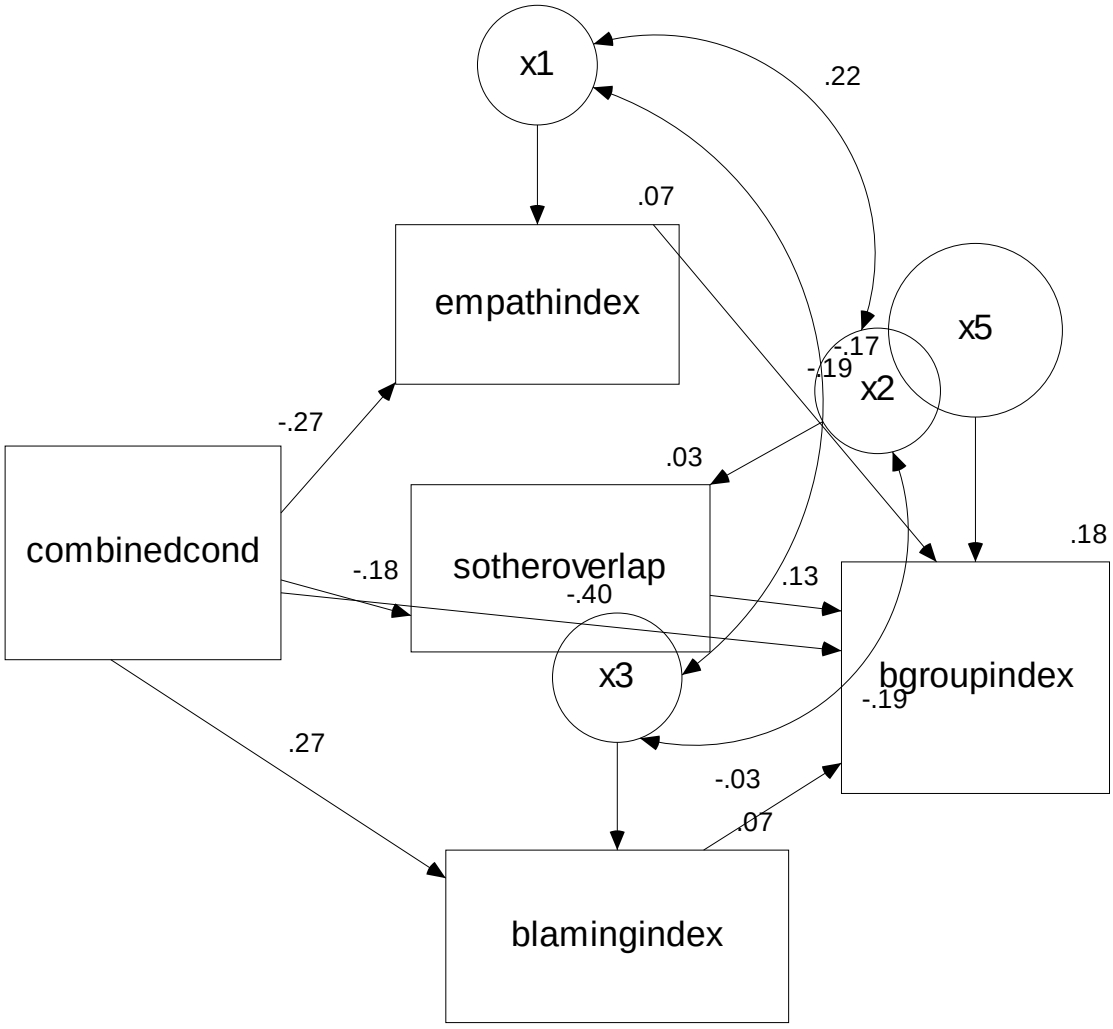


Figure 12: Mediational Path Diagram for Group Prejudice

variables were set to covary, suggesting that empathy does not primarily act upon self-other overlap.

Next, we proceeded to explore the opposite prediction— that self-other overlap may act upon empathy. Path models were arranged in which self-other overlap was configured as the "primary actor." Results were slightly more successful, with an acceptable model fit, $c2(1) = 3.47$, $p = .06$), achieved when self-other overlap was set to predict empathy (but not blaming attributions). While this model meets basic criteria for a sufficient fit, it is important to note that p is only slightly above the .05 cut-off, suggesting the model is not a strong fit. Finally, path models where blaming attributions predicted self-other overlap or empathy were consistently a poor fit ($c2 > 5$).

Exploratory models for group prejudice yielded similar results, such that empathy-driven configurations were consistently a poor fit, as were models based on blaming attributions predicting the other two mediators. However, a sufficient model fit emerged when self-other overlap was set to predict empathy (but not blaming attributions), $c2(1) = 3.38$, $p = .07$). This path arrangement is nearly identical to the individual prejudice model reported above, and identical cautions regarding the weak (but sufficient) model fit should be extended.

Given previous results that empathy was the only significant mediator of perspective-taking on group prejudice, we altered the model such that self-other overlap predicted empathy which alone predicted group prejudice. This path model was a better fit, $c2(2) = 3.75$, $p = .15$, and was the only configuration of the many reported above whose p-

value rose above .10, suggesting a more appropriate capture of the data.

Discussion

Basic Findings

The first research question was practical in nature, addressing whether a perspective-taking intervention could reduce prejudice toward mental illness stigma. Results indicate it did, as both social distance toward the individual and behavioral intentions toward the group (in the form of budget cuts) were significantly improved for those in the perspective-taking condition compared to the objective group. This extends the literature on the success of perspective-taking to a new social problem: mental illness stigma.

The Power of the Story

As on most measures, the "no instructions" condition mirrored the perspective-taking condition in showing less prejudice toward the individual and the group. This suggests that if the stimulus materials are sufficiently compelling, participants will naturally assume a perspective-taking orientation. However, while the "no instructions" condition showed similar patterns, it may be important to note that the perspective-taking group consistently showed slightly greater (but not significantly different) effects on almost all measures, indicating that the maximum attitude change is likely achieved through a combination of compelling narratives *and* specific instructions, the latter tenant of which was also observed by Galinsky & Ku (2005).

The power of the vividness and realism in the narratives (otherwise known as verisimilitude) to engage the listener also speaks to Batson's observation that faux self-other overlap effects (and a corresponding lack of empathy effects) can be driven by poverty in the stimulus materials (personal communication, March 7, 2007). In line with this notion, the current study had rich stimulus materials and showed robust effects for empathy (and self-other overlap), with empathy having a more generalized impact.

From a practical standpoint, it is advantageous that prejudice reductions can be achieved more naturalistically using first-person narratives, without providing participants with specific instructions that may create a hyperaware context. Thus, first-person narratives could be interwoven into curriculum for Introductory Psychology classes, creating an in-vivo naturalistic stigma intervention for thousands of students. Previous research by Mann & Himelein (2008) offers support for this idea, as they found that teaching psychopathology using first-person narratives led to significant reductions in mental illness stigma among undergraduates whereas the traditional method of instruction did not.

On a theoretical level, such results speak to the unique power of narratives to engage humans. Research in the field of neurolinguistics has shown that stories have a special ability to activate regions in the brain and to influence our beliefs about the world (see Hsu, 2008). As the current study demonstrates, narratives impact their audience on numerous levels, including: cognitive, emotional, social, and self-related dimensions.

Literature in anthropology adds that storytelling is one of the few truly universal human activities, appearing in every culture on earth. Evolutionary theorists hypothesize

that storytelling serves several functions, including the chance to increase social cohesion with ingroup members (Hogan, 2003). This purpose appears to link easily with self-other overlap theory, specifically the notion that listening to another narrative leads to the inclusion of the outgroup in the ingroup.

Other evolutionary theories speak to the importance of stories as a form of "dress rehearsal"— a safe place to be exposed to new stimuli and practice emergent social skills (Gottschall & Wilson, 2005). Along these lines, one may hypothesize that hearing narratives of stigmatized groups serves as a form of exposure therapy, allowing the individual to practice establishing contact (albeit vicarious) with the frightening "other." It is not surprising, then, that they have increased social comfort following this "practice" encounter, as exposure has been known to decrease fear and increase perceived competence in clinical settings (see Barlow, 2001).

Finally, research in the field of linguistics also shows that stories are more persuasive than non-stories. In a clever study manipulation, Oatley (1999) presented the same information either in story form or in fact form, and found that participants were more persuaded and less defensive or critical when exposed to the information as a narrative. This suggests that evolutionarily and neurologically, humans are uniquely wired to be receptive to narratives, making this an ideal medium for prejudice interventions.

Mediation

The second research question focused on the theoretical mechanisms underlying

perspective-taking. Results showed a significant impact of the intervention on all three potential mechanisms, such that participants in the perspective-taking and "no instructions" conditions reported higher empathy, greater self-other overlap, and significant changes in attributions.

Important themes emerged from mediation analyses, which showed that all three key players— empathy, self-other overlap, and attributions— partially mediated the relationship between perspective-taking and decreased prejudice toward the target individual (in the form of social distance). In interpreting these findings, it is important to note that all the mediators are partial. Nonetheless, this research suggests that connections between perspective-taking and reduced individual prejudice are complex, and there is room for affective, cognitive, and self-related variables.

Yet the story for prejudice toward the group is a different one. Here, empathy emerged as the only significant mediator when behavioral intentions toward the group (in the form of budget cuts) was the outcome variable. Why would self-other overlap and blaming attributions not extend their impact to prejudice toward the group? One explanation is that these are more individual factors: explanations made about the target person's behavior may not generalize as easily to a group of people. Similarly, the variable of self-other overlap may be a uniquely individualistic process, thus not coming into play when participants considered the group. Yet, these results are somewhat surprising, as Galinsky & Moskowitz (2000) found that self-other overlap *did* extend to the out-group. Their study used the "minimal group paradigm," however, creating arbitrary delineations between groups, whereas this study deals

with existing and strongly held separations.

Alternately, it may be that for determining one's behavior toward the group (i.e. allocating funds), the question of why those individuals do what they do, or whether one overlaps with them, may not as relevant as how one feels about them. In other words, the process of making such broad decisions with little info may rely more on affective processes such as empathy. This theory echoes research on the role of affect in attitude formation and change, which states that affect can often have more diffuse, powerful, and wide-ranging influences (see Petty & Cacioppo, 1981; Zajonc, 1980)

Interestingly, the fact that empathy generalized so well to impact intentions toward the group follows Batson's 3-step hypothesis precisely: Specifically, Batson argues that feeling empathy for the individual will lead to valuing that person's welfare, which will in turn lead to valuing the group's welfare, assuming group membership is salient. These results, indicating that empathy alone extended influence to reduce group prejudice, offer support for Batson's theory.

Because no studies have simultaneously explored all three theories and their corresponding variables (empathy, self-other overlap, attributions) even-handledly, there is little conceptual integration in the field. For example, no detailed theories exist to explain whether, or how, empathy and self-other overlap might, in fact, overlap. The exploratory path models run in this study can offer tentative directions for further research on this subject.

In the individual prejudice model, self-other overlap appeared to act upon empathy

while blaming attributions took an entirely separate route. However, we are reluctant to interpret these results extensively, given that the model fit was only slightly above the acceptable cut-off, inspiring little confidence.

Yet, the exploratory model for group prejudice was more solid and revealed an interesting pattern: Self-other overlap appeared to act on empathy, while empathy alone (not self-other overlap) in turn influenced group prejudice. Blaming attributes were not impacted by either variable and therefore took a separate route, contributing less to the variance.

Interestingly, this configuration echoes the ideas raised in the introduction of this paper, most notably that self-other overlap and empathy share common ground, despite their adversarial

relationship in the literature. It is our observation that self-other overlap is frequently oversimplified, such that the self eclipses the other rather than a truer or more nuanced merging of the two. In a softer (perhaps more collectivistic, less egoistic) understanding of the concept, awareness of self is used as a tool for empathizing and connecting with others, which defines self-other overlap.

It is interesting to note that children are not able to develop empathy or perspective-taking ability until after the emergence of a self, and rudimentary awareness of ones own emotions and knowledge (). In clinical realms, therapists often attempt to hone their perspective-taking skills, with attention being paid to mindfulness and awareness of one's own emotions in the therapy setting. Such practices are rooted in the notion that in order to connect with clients, one has to be able to tap into some self-related emotion, and to then

disentangle the two properly in a complex dance of mindfulness and connection.

Thus, the process of self-other overlap, if tied more closely to empathy, may be seen not as an event for unilateral projection of the self but as a more egalitarian overlap. Individuals who show high self-other overlap but low empathy may not have decreased prejudice, since the path model suggests empathy alone acts in the final step. Perhaps those individuals who self-other overlap without empathy are those who are "projecting" rather than accurately perceiving, or are those who have poor empathy for themselves (i.e. low self esteem, as Galinsky proposes).

Different measures of self-other overlap could be employed to examine this hypothesis more closely. For example, using a list of adjectives to be linked with self and other, researchers could rate how accurate participants' endorsements of the descriptors were for the target individual, or whether participants simply applied their own adjectives to the other.

Role of Attributions

One of the strengths of our study is that it offered the chance to analyze attributional changes on a more complex level. Specifically, by including both positive and negative events in the narratives, we were able to test whether attributions followed a straight situational pattern or whether they mirrored attributions made about the self. We found the latter to be true, with a significant three-way interaction between condition, valence of event, and attributional direction.

This more "self-like" pattern may lend support to the self-other overlap theory. Yet, closer examination of the 3-way interaction showed that most of the action occurred around

one factor: blaming attributions (or more dispositional, less situational attributions about negative events). This complicates the picture because both self-related and traditional attribution theories predict less blaming attributions following perspective-taking, and this appears to be the critical variable.

Yet, the 3-way interaction associated with the self-related theory was significant, and it may be of interest to note that while there were no significant differences between conditions for attributions about positive events, the raw data was in a self-biased direction, with the perpective-taking group attributing positive events more to *dispositional* forces and the objective-taking group linking them slightly more to situational factors.

Thus, the data from this study do not fit neatly into the "self" or "situational" theory of attribution change, which raises questions about the applicability of the two main theories and whether they are truly orthogonal, as we once assumed. Perhaps our assumptions were correct and future research simply needs to revisit this question using more subjects or focusing on a more "traditional" target prejudices (i.e. racism) to delineate attributional patterns. Or, perhaps the theories (and our assumptions) need to be expanded.

It was our original idea that a more "self-like" pattern of attributions would reflect more involvement of the self in the perspective-taking process, and thereby lend support to Galinsky's self-other overlap theory. Yet, self-other overlap did not correlate with the self-bias index of attributions in our study, as one might expect it would. It did, however, correlate significantly with the "negative events only" version of this (i.e. the blaming index), suggesting that self-other overlap may drive changes in attributions, but it does so more

strongly regarding negative events. Evidence on the preeminence of negative over positive factors in forming attitudes and in human attention (Fazio, Eiser, & Shook, 2004) could offer some explanation for such an imbalance. Yet, the perceptual-based theories cannot be ruled out in this case either, as and more research is needed on the subject.

Moderation

Tests of moderation also yielded interesting results. First, the Concern for Acting Prejudiced (of the Motivation to Control Prejudice scale) emerged as a significant moderator of condition on social distance. For those in the perspective-taking group, it operated as one might expect, with those more concerned about acting prejudiced showing more receptivity (in the form of decreased social distance) to the intervention to fight prejudice. However, individuals in the objective condition showed a reversed pattern, such that those higher in concern for acting prejudice actually showed more prejudice following the narrative.

This is a difficult finding to explain, and one for which we made no specific hypotheses. It is possible that individuals, when told to be "objective" were over-compensating for their natural tendency to not want to appear prejudiced by reporting more social distance. An alternative hypothesis, loosely grounded in aversive racism theory (see Dovidio & Gaertner, 2000), is that participants more concerned about acting prejudiced experienced more anxiety when being exposed to an individual who triggered prejudiced ideas, and this anxiety translated into greater social distance.

Effects were also observed for subscales of Davis's Interpersonal Reactivity Scale, which was administered prior to the intervention to tap participants' natural inclination

toward empathy and perspective-taking. Participants higher in empathic orientation showed marginally less prejudice toward the target individual in all conditions, but this effect only reached significance in the objective condition, presumably because participants in the other conditions were already experiencing higher levels of empathy from the intervention. Natural perspective-taking orientation did not lead participants to be more impacted by the intervention, as we had hypothesized, indicating that participants are equally receptive to perspective-taking interventions regardless of future orientations toward or against the process.

When prejudice toward the group (via budget cuts) was the outcome variable, a similar pattern emerged for the empathy subscale, such that those with greater empathic orientation showed less group prejudice, but primarily in the objective condition. Also, the perspective-taking orientation significantly moderated the effect of condition on group prejudice, with participants in the objective group who were more naturally inclined toward perspective-taking actually demonstrating decreased group prejudice. For such individuals, perspective-taking seemed to occur naturally and despite instructions to be "objective."

Issues of Generalizability between AIDs and Mental Illness Stigma

It is interesting to note that in terms of the feeling thermometer— a measure of global emotion toward the group— the intervention led to more positive affect toward individuals with AIDS (the comparison prejudice), but had no effect on attitudes toward persons with mental illness.

One possible explanation for these discrepant findings focuses on the generalizability of the intervention. Attitudes toward the target individual (who had bipolar disorder) appeared to generalize to the group intentions measure but not the feeling thermometer. Because the group intentions measure asked about budget cuts toward a campus organization associated with mentally ill persons, it is likely participants viewed the target group here as "college students with mental illness." In contrast, the feeling thermometer asked about attitudes toward "mentally ill people"— a subtle, but potentially critical, distinction.

Previous research (Link, Phelan, Bresnahan, Stueve, Pescosolido, 1999) has shown that the phrase "mentally ill people" calls to mind actively psychotic individuals in mental institutions. Thus, it makes sense that attitudes toward the bipolar woman would not generalize to this discrepant construct, whereas they would generalize to college students with mental illness (who are presumably not currently institutionalized).

These findings address a key issue in the field— whether the phrase "mental illness stigma" is a useful construct or simply a "catch-all phrase" with little practical relevance. In an era where citizens are exposed to specific pharmaceutical advertisements regarding "bipolar disorder" and "generalized anxiety," it is unlikely that many individuals retain such undifferentiated categories as "mental illness." Indeed, research has shown that prejudice toward different mental illnesses differs significantly (Mann & Himelein, 2004), and that the image called to mind by the phrase "mentally illness" bears little relevance to the majority of individuals who have mental illnesses (Link, Phelan, Bresnahan, et al., 1999).

Based on this information, perhaps future research should ask about global affect

toward individuals with specific mental illnesses (i.e. depression, bipolar, obsessive-compulsive disorder) rather than individuals with "mental illness." While this methodology is certainly more cumbersome, it may afford a more realistic measurement of attitudes toward mental illness.

Alternatively, these discrepant results on the feeling thermometer may emanate from true differences in affective change between the AIDs and bipolar conditions rather than issues of generalizability. It is possible that the intervention decreased participants' prejudiced *behavioral intentions* toward both the individual and the group, but did not alter the underlying global affect toward mentally ill persons. In this case, the discrepant findings on the feeling thermometer would indicate that emotions associated with mentally ill persons may be stronger or less malleable than those toward people with AIDS.

There is some evidence to support this notion. Specifically, studies suggest that one of the key components of prejudice toward mental illness is fear, specifically the belief that mentally ill persons are "dangerous," "unpredictable," and "violent" (Phelan & Link, 1998))—factors presumably not associated with HIV-positive persons. Since fear is arguably one of the deepest and more stubborn emotions to alter, it is possible the intervention was not strong enough in this realm to create change.

Fear is also a key component of stigma toward mental illness in that one may fear *becoming* mentally ill. This perspective draws much from terror management theory. In the same way that ageism is driven by fear of own our mortality (Martens, Goldenberg, & Greenberg, 2005) and ableism driven by discomfort with our own vulnerability to physical

injury, stigma toward mental illness may be fueled by implicit anxiety concerning our own mental frailty. A clever study by Farina (1991) showed that people were actually *more* aggressive toward their mentally ill partner when they were told that mental illness was biologically and genetically determined.

These results are especially troubling given the current Zeitgeist for biologically-based explanations of mental illness, and subsequent media campaigns by NAMI and other groups proclaiming "mental illness is an illness like any other." The current study demonstrates that it is not, at least in terms of the stigma leveled against individuals with mental illness compared to physical illness like AIDS, and arguments of false equality may be detrimental if they obscure real differences.

Yet, these messages of equality between mental and physical illness can be viewed through the historical lens of social movements. Early in the Civil Rights movement, "color blind" arguments were popular, proclaiming that there were no differences between Blacks and Whites. Such simplistic views are now rejected in favor of multicultural perspectives (Richeson & Nussbaum, 2004) yet it is interesting to see how they resurface in this, the early stages of the Consumer Rights Movement. In a time where mental illness stigma is so rampant and individuals do not yet have full parity in terms of insurance and treatment, it is understandable why national advocacy groups may turn to these misguided messages.
In reality, educational approaches to reducing stigma have received less research support than contact or affect-based interventions (Corrigan et. al., 2001) and biologically-based explanations, once hailed as a panacea for stigma, have been found to be potentially

harmful (Farina, 1991). This empirical evidence needs to be better disseminated into the sphere of public advocacy.

Furthermore, key differences between mental illness stigma and other prejudice should be more thoroughly researched, including the potential influence of "fear of becoming mentally ill" on the stigma process.

Unfortunately, because our study included no global affective measures aside from the Feeling Thermometer, it is impossible to determine whether the failure of the intervention to change global feelings toward mentally ill persons represents limited generalizability, the poor utility of the term "mentally ill persons," or a true affective (specifically fear-based) difference between the two prejudices. Future research might examine this question with prejudice toward African-American males, which is similar in that it also includes strong affective components such as fear of violence. While perspective-taking has been shown to improve cognitively-oriented attitudes toward African-American males (Vescio, Sechrist, & Paolucci, 2003), to our knowledge the Feeling Thermometer has not been used as a dependent measure in such a study.

Yet, even as we address the lack of effects of the intervention on global feelings toward "mentally ill persons," it is important to note that the intervention improved attitudes on all other measures and that the feeling thermometer did show results for attitudes toward persons with AIDS. This bodes well for the power of perspective-taking interventions to decrease prejudice not just toward the target individual and the immediate context (i.e. college students with AIDS) but also toward the larger social group. This finding echoes previous research in

the field, which indicates that perspective-taking interventions can change attitudes not just toward the individual, but toward the larger group as well (i.e Batson et. al., 1997; Galinsky & Moskowitz, 2000).

Results for the bipolar and AIDS condition differed on other dimensions as well. Specifically, participants reported less social distance (but not less group prejudice) toward the HIV-positive individual than toward the bipolar person, a pattern that appeared in all three conditions. This finding echoes previous research indicating that prejudice against mental illness— specifically in the form of social distance— is more severe than prejudice toward physical illness (see Corrigan, 2005). When it comes to stigma, mental illness is *not* "just an illness like any other."

Implications for Reducing Mental Illness Stigma

Such results speak to the need for more research on mental illness stigma, as it remains the number one barrier to mental health treatment in this country (U.S. Surgeon General, 1999). The fact that participants report relatively higher levels of social distance toward these individuals is especially troubling given the research stating that social support is one of the most important protective factors in mental health (Dalgard, Bjork, & Tamb, 1995). Individuals with mental illness need social support to aid in processing the significant stressors they face. When the very process of seeking this support becomes stressful (through prejudice by others), they are more at risk for relapse (Sirey, Bruce, Alexopoulos, et al., 2001).

Research has documented the uniquely painful impact of social rejection for humans.

Even in laboratory settings where the reason for rejection is arbitrary and peripheral to the person's identity, individuals show surprisingly severe reactions to being rejected: They hang their heads in shame, cry, have lowered self-esteem, and increased depressive thoughts (Williams, K.D., Cheung, C.K.T., & Choi, W., 2000). If social rejection has such powerful consequences for "healthy" (non-mentally ill persons) in an artificial setting, imagine how detrimental it can be to someone already struggling with general anxiety disorder, for example, to face this experience over and over again— not from strangers but from their own family and friends.

Given this process, it is easy to see how mental illness stigma is indeed the #1 barrier to treatment in this country. The clinical literature shows that shame is an especially crippling emotion interpersonally; it leads to decreased help-seeking, increased isolation, and decreased self-disclosure (see Tangney & Dearling, 2003). Thus, for clients who do manage to seek help, they may carry with them into therapy the notion that they are "weak" or "damaged" and afraid to show themselves to others, who will likely reject them. While such negative thoughts may be a symptom of a psychological disorder, they may also be a natural reaction to a prejudiced society. Therapists who are not attuned to this process may misattribute client's ambivalence as "resistance" linked to distant intra-psychic forces rather than more immediate social experiences.

In line with this reasoning, research has shown that clients who perceive more stigma are more likely to prematurely discontinue therapy (Sirey, Bruce, Alexopoulous, 2001; Perlick, Raue, Friedman, et. al., 2001). One possible explanation for this lies in the retreat-

and-isolate dynamic frequently associated with shame (Tangney & Dearling, 2003). As the client shares their story they may not experience the relief many therapists assume occurs; rather, exposing their problems to another may heighten their fear of rejection and feelings of "wrongness."

Therapists and doctors unaware of these shame-related feelings may inadvertently aggravate client's schemas of defectiveness by casually conferring a diagnosis without properly demystifying it or processing the client's understanding of that label. Similarly, the unspoken implications of taking medication, for example, may trigger client's schemas of defectiveness (i.e. "I have to take medicine because I am broken"), ultimately leading to medication "non-compliance"— a pejorive word frequently used in the field, which implicitly links clients to children who should "comply" with authority figures/doctors. In his overarching review of the field, Corrigan (2005) lists internalized stigma as a key issue facing those with mental illness. While clients are too often painfully aware of its presence, therapists frequently brush over this area.

Thus, clinical implications of this study point to the need for therapists to better understand the prejudice facing their clients, perhaps placing this in a larger cross-cultural context. For example, research indicates that LGBT individuals who are not "out" regarding their sexuality experience increased distress (D'Augelli, & Patterns, 1995), just as depressed individuals without social support show more severe symptoms. Yet, the social context of these individuals should be recognized: More recent research suggests that LGBT persons may not feel safe "coming out" and may thus have increased distress due to subtle or overt

discrimination in their environment rather than due to their not being "out" per se (see Mays & Cochran, 2001); similarly, a person with depression may be unable to discuss their illness with friends or family who express blaming or unsafe attitudes regarding depression. While clinicians should continue to encourage seeking social support, a healthy understanding of the cultural environment and consideration of safer places to receive support should be in the forefront.

While there are inarguably many parallels between prejudices, these subtle differences in our results between attitudes toward AIDs and mental illness should lend caution to those who assume all prejudices are the same. More research needs to be conducted to determine how mental illness stigma differs from other prejudices, especially in terms of underlying global affect and interpersonal distance, as these two variables showed significant differences when others did not.

Summary

In conclusion, results from this study indicate that a perspective-taking intervention can successfully reduce prejudice toward mental illness, and that if the stimulus materials are vivid enough, participants may automatically assume a perspective-taking orientation. This holds promise for more naturalistic interventions rooted in first-person narratives. As expected, perspective-taking also led to increased empathy, self-other overlap, and altered attributions. All three variables partially mediated the relationship between perspective-taking and reduced stigma toward the individual, but only empathy emerged as a significant partial

mediator of group prejudice.

In its design, this study sought to disentangle the contributions of self-other overlap and attributional theories by examining discrepant explanations of positive and negative events. While results leaned toward support of a more self-based process, this pattern was not clear. Most of the change in attributions occurred on the negative events, suggesting that this is the key dimension.

Ultimately, more research needs to be conducted to explore the mechanisms behind perspective-taking and the range of its application to social problems.

Future Research

This project represents only the first step in a larger series of programmatic research studies on mental illness stigma.

Given that the current study showed significant reductions in explicit prejudice, we are now developing and testing an implicit measure of mental illness stigma to determine whether the effects of perspective-taking interventions may extend to implicit realms as well. To our knowledge, this would be the first such experiment to explore the effect of perspective-taking on implicitly-assessed attitudes.

Because participants are often reluctant to admit prejudice on explicit measures and because our attitudes may be driven by less deliberate, more automatic processes, researchers have increasingly turned to the use of implicit methods to tap hidden attitudes (Fazio,

Jackson, Dunton, & Williams, 1995; Olson & Fazio, 2003). Of the two measures used— the IAT (Implicit Association Test) and priming procedures— the latter appears to yield a more accurate reflection of individual's personal attitudes, and is less subject to societal influences (Han, Olson, & Fazio, 2006). Priming procedures typically require participants to categorize objects as positive or negative immediately after being presented with a brief cue (or prime) related to the target group (i.e. an African-American face). Analysis of reaction times then reflects the participants' level of prejudice (Strahan, Spencer, & Zanna, 2002). For example, if an individual harbors negative attitudes toward African Americans, they will be quicker to correctly identify negative words when they are immediately preceded by an African-American face (a facilitating effect), and slower to identify positive words following this same prime (inhibitory effect).

Development of an implicit measure of stigma is ideal, but is difficult because, unlike ethnic identity, mental illness is an invisible marker. Using words as primes is not an effective solution because flashing the words "bipolar disorder" or "schizophrenia" on the screen will likely tap attitudes toward the illnesses themselves (which are naturally negative) rather than the individuals with these illnesses.

Yet, the use of individual pictures and names paired with personal information (i.e. "This is John: a business major, and he has bipolar disorder") may provide a venue for measuring stigma implicitly. In this procedure, once participants become acquainted with the individuals in the pictures, they will have stored their visage and name in their memory. These can then serve as primes in an implicit measure, such that an image of "John" (who

previously was connected with bipolar disorder) is the stimuli presented before the lexical decision task. Participants' reaction times would then reflect their attitudes toward the target individuals, which should presumably relate to their attitudes toward the larger group (i.e. mentally ill persons) on some level.

While prejudice studies have not employed this method, researchers have successfully used single, known individuals as primes to measure couples' attitudes toward each other (Vayas & Shoda, 2005). This procedure would differ, in that the vignette individuals are fictional acquaintances the participants have "known" for less than 1 hour.

Admittedly, this method would be somewhat unorthodox, but the unique nature of our target attitude requires improvisation. If this measure proves successful, it would provide valuable complementary evidence to the explicit reports of stigma. Furthermore, it would be the first time implicit measures have been used to tap stigma toward mental illness, and would enrich future research in the field of mental illness stigma.

Interestingly, tapping attitudes implicitly might also provide another avenue through which to explore the role of various mechanisms in the perspective-taking process. For example, empathy may emerge as a stronger predictor of change in implicit attitudes (assuming implicit attitudes are indeed altered by perspective-taking protocols, which remains an empirical question), whereas self-other overlap may be key in explicit attitudes. Overall, the development of an implicit measure of mental illness stigma to be used in perspective-taking studies would open the door for numerous theoretical inqueries.

In the future we also hope to expand the current design to include other factors that

may influence perspective-taking, such as the need to self-affirm. It was brought to our attention by a colleague (Lowell Gaertner) that participants might be motivated to change their attributions about the other person in order to affirm themselves (personal communication, April 13, 2007). This would be especially true if there is self-other overlap involved, as Galinsky proposes. In other words, if the observer and the interviewee indeed become one during perspective-taking, the observer may need to explain the interviewee's life events in positive ways in order to enhance his/her own self-esteem, vicariously. This new motivational theory is especially interesting because it lends itself easily to experimental designs, where researchers can provide other means of self-affirmation and see if participants are thereby satisfied, or if they still offer positive explanations for the interviewee's behavior. If they do the latter, this suggests that different explanations of the interviewee's behavior are not motivated by the need to self-affirm. This is an interesting line of research we plan to pursue in the future.

Conclusion

The ultimate goal of this programmatic research is to increase understanding of mental illness stigma and offer empirically supported solutions to reducing this prejudice in society. After all, it matters little what effective treatments are available for individuals with depression or obsessive-compulsive disorder, if the invisible stigma of mental illness prevents them from ever walking through the door.

REFERENCES

References

Allport, Gordon. 1954. The Nature of Prejudice. Cambridge, MA: Addison-Wesley.

Aron, A. & Fraley, B (1999). Relationship closeness as including other in the self: Cognitive underpinnings and measures. *Social Cognition*, 17, 140-160.

Barlow, D. (Ed) (2001). *Clinical Handbook of Psychological Disorders.* New York: Guilford Press.

Batson, D.C., Batson, J.G., Slingsby, G.K., Harrell, K.L., et al. (1991). Empathic joy and the empathy-altruism hypothesis. *Journal of Personality and Social Psychology* (61), 413-426.

Batson, C.D., Early, S., & Salvarani, G. (1997) Perspective taking: imagining how another Feels versus imagining how you would feel. *Personality and Social Psychology Bulletin*, 23, 751-758.

Batson, C.D., Polycarpou, M.P., Harmon-Jones, E., Imhoff, H.J., Mitchener, E.C., Bednar, L.L., Klen, T.R., Highberger, L. (1997). Empathy and attitudes: Can feeling for a member of a stigmatized group improve feelings toward the group? *Journal of Personality and Social Psychology*, 72, 105-118.

Byrnes, D.A., & Kiger, G. (1990). The effects of a prejudice-reduction simulation on attitude change. *Journal of Applied Social Psychology*, 20, 341 – 356.

Cialdini, R.B., Brown, S.L., Lewis, B.P., Luce, C., & Neuberg, S.L. (1997). Reinterpreting the empathy- altruism relationship: when one into one equals oneness. *Interpersonal Relations and Group Processes,* 73, 481-494.

Chung, K, Chen E, Liu C (2001). University students' attitudes towards mental patients and psychiatric treatment. *International Journal of Social Psychiatry*, 47, 63-72.

Corrigan, P.W., Markowitz, F.E., Watson, A.C., Rowan, D., & Kubiak, M.A. (2003) Attribution and Dangerousness Models of Public Discrimination Towards People With Mental Illness. *Journal of Health and Social Behavior*, 44, 18-30.

Corrigan, P. & Penn, D (1999). Lessons from social psychology on discrediting psychiatric stigma. *American Psychologist*, 54(9), 765-776.

Corrigan, P.W., River, P.L., Lundin, R.K., Wasowski, K.U., Campion, J., Mathisen, J., Goldstein, H.,Bergman, M., Gagnon, C., & Kubiak, M.A (1999). Stigmatizing attributions about mental illness. *Journal of Community Psychology*, 28, 91-102.

Corrigan PW, River LP, Lundin RK., Wasowski, K.U., Campion, J., Mathisen, J. Gagnon, C.,

Bergman, M., Goldstein, H., & Kubiak, M.A. (2001). Three strategies for changing attributions about severe mental illness. *Schizophrenia Bulletin*, 27, 187–195.

Corrigan, P.W. (Ed) (2005). *On the stigma of mental illness: Practical strategies for research and social change*. Washington, D.C.: American Psychological Association.

Coke, J.S., Batson, C.D., & McDavis, K. (1978). Empathic mediation of helping: A two -stage model. *Journal of Personality and Social Psychology*, 36, 752-766.

D'Augelli, A. & Patterns, C. (Eds) (1995). *Lesbian, gay, and bisexual identities over the lifespan: Psychological perspectives.* New York: Oxford University Press.

Dalgard, O.S, Bjork, S., & Tamb, K. (1995). Social support, negative life events and mental

health. *The British Journal of Psychiatry*, 166, 29-34.

Davis, M. (1983). Effects of dispositional empathy on emotional reactions to helping: a multidimensional approach. *Journal of Personality*, 51, 167-284.

Dovidio, J.F. & Gaertner, S.L. (2000). Aversive racism and selection decisions: 1989 and 1999. *Psychological Science*, 11, 315-319.

Duntan, B.C. & Fazio, R.H. (1997). An individual difference measure of motivation to control prejudiced reactions. *Personality and Social Psychology Bulletin*, 23, 316-326.

Duval, S., & Wicklund, R. A. (1973). Effects of objective self-awareness on attribution of causality. *Journal of Experimental Social Psychology,* 9, 17-31.

Farina, A. (1981). Are women nicer people than men? Sex and the stigma of mental disorders. *Clinical Psychology Review*, 1(2), 223-243.

Fazio, R. H., Jackson, J. R., Dunton, B. C., & Williams, C. J. (1995). Variability in automatic activation as an unobtrusive measure of racial attitudes: A bona fide pipeline? *Journal of Personality and Social Psychology*, 69, 1013-1027.

Fazio, R.H., Eiser, R.J., & Shook, N.J. (2004). Attitude formation through exploration: valence asymmetries. *Journal of Personality and Social Psychology*, 87, 293–311.

Galinsky, A.D., & Ku, G. (2004). The effects of perspective-taking on prejudice: the moderating role of self-evaluation. *Personality and Social Psychology Bulletin*, 30, 594-604.

Galinsky, A.D., Ku, G., & Wang, C.S. (2005). Perspective-taking and self-other overlap: Fostering social bonds and facilitating social coordination. *Group Processes &*

Intergroup Relations, 8, 109-124.

Galinsky, A.D., & Moskowitz, G.B (2000). Perspective-taking: Decreasing stereotype expression, stereotype accessibility, and in-group favoritism. *Journal of Personality and Social Psychology,* 78, 708-724.

Gerard, H.B & Miller, N. (1975). *School desegregation: A long-range study.* New York: Plenum Press.

Gottscall, J. & Wilson, D.S. (Eds) (2005). *The Literary Animal: Evolution and the Nature of Narrative.* Chicago: Northwestern University Press.

Han, A.H., Olson, M.A., Fazio, R.H. (2006). Influence of experimentally created extrapersonal

associations on the Implicit Associations Tests. *Journal of Experimental Social Psychology*, 42, 259-272.

Hinshaw, S, Cicchetti, D (2000). Stigma and mental disorder: Conceptions of illness, public attitudes, personal disclosure, and social policy. *Development and Psychopathology,* 12,555-598.

Hogan, P.C. (Ed) (2003). *The Mind and its Stories: Narrative Universals and Human Emotion.* Cambridge, MA: Cambridge University Press.

Holmes, E., Corrigan, P. W., Williams, P., Canar, J., & Kubiak, M. A. (1999) Changing attitudes about schizophrenia. *Schizophrenia Bulletin*, 25(3), 447-456.

Hsu, J. (2008). The secret of storytelling. *Scientific American Mind*, 19(4), 46-51.

Johnson D.W. & Johnson, R.T (1989) *Cooperation and Competition: Theory and Research.*

New

York: Interaction Book Company.

Jones, E.E. & Nisbett, R.E. (1972). The actor and the observer: Divergent perceptions of causality. In Jones, E.E. (Ed). *Attribution: Perceiving the causes of behavior.* Morrisontown, NJ: General Learning Press.

Levin S. & Van Laar, C. (2008). *Stigma and group inequality.* New Jersey: Laurence Earlbaum Associates.

Link, B.G., Phelan, J.C., Bresnahan, M., Stueve, A., & Pescosolido, B.A. (1999). Public conceptions of mental illness: labels, causes, dangerousness, and social distance. *American Journal of Public Health,* 89, 1328-1333.

Link, B.G., Struening, E.L., Neese-Todd, S., et. al (2001). The consequences of stigma for the self esteem of people with mental illness. *Psychiatric Services*, 52, 1621-1626.

Malle, B.F. (2006). The actor-observer asymmetry: A (surprising) meta-analysis. *Psychological Bulletin*, 132, 895-919

Mann, C.E. & Himelein, M.J. (2004). Factors associated with the stigmatization of persons with mental illness. *Psychiatric Services*, 55, 185-187.

Mann, C.E. & Himelein, M.J. (2004). Poetry and the DSM-IV: Interventions to Reduce Mental Illness Stigma. Poster session presented at the annual meeting of the Southeastern Psychological Association. Atlanta, GA.

Martens, A., Goldenberg, J. L., & Greenberg, A. (2005). A terror management perspective on ageism. *Journal of Social Issues*, 61, 223-239.

Mays, V.M. & Cochran, S.D. (2001). Mental health correlates of perceived discrimination among lesbian, gay, and bisexual adults in the United States. *American Journal of Public Health*, 91, 1869-1876.

Miller, D.T. & Ross, M. (1975). Self-serving biases in the attribution of causality: Fact or fiction? *Psychological Bulletin*, 82, 213-225.

Nelson, T. (2005). Ageism: Prejudice against our feared future self. *Journal of Social Issues*, 61, 207-221.

Nyberg, D. (1990). Teaching values in school: The mirror and the lamp. *Teachers College Record*, 91, 595 – 611.

Oatley, K. (1999). Why fiction may be twice as true as fact: Fiction as cognitive and emotional stimulation. *Review of General Psychology*, 3(2), 101-117.

Olson, M.A. & Fazio, R.H. (2003). Relations between implicit measures of prejudice: What are we measuring? *Psychological Science,* 14, 636-639.

Olson, M. A., & Fazio, R. H. (2006). Reducing automatically-activated racial prejudice through implicit evaluative conditioning. *Personality and Social Psychology Bulletin*, 32, 421-433.

Perlick DA, Rosenheck RA, Clarkin JF, et al (2001). Adverse effects of perceived stigma on social adaptation of persons diagnosed with bipolar affective disorder. *Psychiatric Services*, 52, 1627–1632.

Petty, R. E, & Cacioppo, J. T. (1981). *Attitudes and persuasion: Classic and contemporary*

approaches.

Dubuque, Iowa: Win. C. Brown.

Phelan, J.C. & Link, B.G. (2008). The growing belief that people with mental illnesses are violent: the role of the dangerousness criterion for civil commitment. *Psychiatric Epidemiology*, 33, 7-12

Regan, D.T., & Totten, J. (1975). Empathy and Attribution: Turning observers into actors. *Journal of Personality and Social Psychology*, 32, 850-856.

Sirey J.A, Bruce M.L, Alexopoulos G.S, et al (2001). Perceived stigma and patient-rated severity of illness as predictors of antidepressant drug adherence. *Psychiatric Services* 52, 1615–1620.

Strahan, E.J., Spencer, S.J., & Zanna, M.P. (2002). Subliminal priming and persuasion: Striking while the iron is hot. Journal of Experimental Social Psychology, 38, 556-568.

Stephan, W.G. & Finlay, K. (1999). The role of empathy in improving intergroup relations. Journal of Social Issues, 55, 729-743.

Tangney, J & Dearling, R. (2003). *Shame and Guilt.* New York: Guilford Publications Inc.

U.S. Surgeon General (1999). *Mental Health: A report of the surgeon general.* Rockville, MD: Department of Health and Human Services, Substance Abues, and Mental Health Services Administration, Center for Mental Health Services, National Institutes of Health, National Institute of Mental Health.

Van Heck, G.L., & Dijkstra, P. (1985). The scope and generality of self-other asymmetry in person perception. European Journal of Social Psychology, 15, 125-145.

Vescio, T.K., & Biernat, M. (1999). When stereotype-based expectancies impair performance: The effect of prejudice, race, and target quality on judgments and perceiver performance. European Journal of Social Psychology, 29, 961-969.

Vescio, T.K., Sechrist, G.B., Paolucci, M. (2003). Perspective taking and prejudice reduction: the mediational role of empathy arousal and situational attributions. European Journal of Social Psychology, 33, 455-472.

Williams, K.D., Cheung, C.K.T., & Choi, W. (2000). CyberOstracism: Effects of being ignored over the internet. *Journal of Personality and Social Psychology*, 79, 748-762.

Zajonc, R. B. (1980). Feeling and thinking: Preferences need no inferences. *American Psychologist, 35,*151-175.

Zayas, V. & Shoda, Yuichi (2005). Do automatic reactions elicited by thoughts of romantic partner, mother, and self relate to adult romantic attachment? Personality and Social Psychology Bulletin, 31, 1011-1025.

Appendices

Appendix A-1: Stimulus Materials, Bipolar Narrative

Interviewer: So tell me about your experience adjusting to college here at UT. First, what were some of your low points or greatest challenges?

Student: I guess college has been a strange experience for me. I'm in a better place now, but when I first moved here I was from this small town in Georgia. And Knoxville was, like, a big city to me. I know it seems weird, but I had a hard time adjusting. I hated the traffic and the people and everything. Like you could never get away. I partied too much my first year—drank way too much, like every Thursday through Sunday. I don't know if the drinking made me depressed or if being depressed made me drink. But it got bad, so my boyfriend at the time was like— "You got problems. You need help." So I went to the health center and they put me on Prozac. And then it started— the worst, and kind of best, experience of my life.

The Prozac definitely worked. Well, it worked too well. I got, like, *really* happy. At first it was awesome. At first I thought it was just the weather— because it was comin' on spring and it was, like, *gorgeous*, and I've always been super affected by the weather. So I started staying up real late every night— 'till 4:00am. And then I'd wake up at 7:00 and not be tired at all. I was, like, super perky all the time. I thought the world revolved around me—the kind of perky that drives everybody else nuts. At first I was still getting my work done. But then things started to get out of hand.

I got too happy to work. And I started all these projects instead. I'm an English

major, right. Well, I started writing this novel about my cat. (laughs). Yeah, it was weird. But no matter how hard I tried, I couldn't bring myself to sit still in class, or study. I would stare at the book for at least two hours, but my mind was just wandering. I couldn't concentrate. So I started failing biology. I think I got a 46 on our mid term. It was horrible, the worst grade I've ever made in my life. But it didn't bother me at the time, because I just thought everything was great. I was on top of the world.

Long story short, I got really hyper one night and I was talking a mile a minute and saying I was gonna drop out of school and start my own company— sky diving for animals. I was gonna call it "Dog Gone." (laughs). I thought it was brilliant at the time. But my friends thought I was on drugs or something, they were worried. They said my thoughts made no sense.

They actually called my mother who decided to put me in the hospital. I screamed at her and hit her and tried to run away when she came. I did NOT want to go. I don't think I will ever forgive her for this. I know she was trying to help, but it felt like a huge betrayal. I mean, do you know what it's like to be *committed*? It was horrible there— they locked me in this tiny room for three days and gave me medicine with God-knows-what in it. Whatever it was, it knocked me out and made like a zombie. I remember falling in shower. They treated me like a little child, there. They took everything away. You couldn't do anything without asking the nurses, and then they got these power trips and wouldn't let you have your freakin' hair brush or anything. It was the worst experience of my whole life, I don't even know how to explain it. I feel like I carry this in me and I'm always different from other

people, because I've seen another reality.

And I wanted to disappear afterward, because I had to come back to school... and what was I going to tell everybody— that I went crazy? My friends were weirded out and kept their distance, but I did too. Cuz I was depressed again. They said I had bipolar disorder, but I refused to believe it. And one of my best friends I pretty much lost contact with over this whole thing.

Over the next two years I went through some major ups and downs— took meds and then didn't— and eventually I've come to the conclusion that I probably do have bipolar disorder, and I definitely need to take meds. I guess I just had to learn the hard way. It's hard sometimes, though. The meds help me, but it's also sad, because I miss those highs sometimes. And the meds don't get rid of all my problems, I still have to be really careful about sleeping, and my moods do fluctuate more than more people. Sometimes I just get in these bad places, and my roommates know to avoid me for a while. It sucks, knowing I have to live with this for the rest of my life. That I can never take my moods for granted, like other people. Having bipolar is like you got to learn to surf, and when the bad waves come you have to say to yourself that it will be over soon, just ride it out. But sometimes it ruins days, and I wish I could just be normal.

Today sucks—not because of the bipolar thing, but I just lost my journal. I have no idea where it could be. It's got all my works in progress—I usually guard that thing with my life. I spent, like, an hour turning the house upside-down, looking for it this morning and I'm worried sick. Maybe I left it in class—I really hope so. I've got to run by there this afternoon.

Interviewer: Okay, what would you say were some positive things have happened during your time here at UT?

Student: Well, a lot of good things have happened since then. I guess, after something like that, you kind of look at your life and say: "Well, it's all uphill from here. There sure ain't nowhere worse to go." First, I got this dog— a yellow lab. She just kept wandering around my neighborhood and one day I called her over and she didn't have a tag or anything. After that, she kept hanging out on my porch and kind of adopted me. So I adopted her, and named her Marshmallow. She makes me so happy!

Oh, and the biggest highpoint in terms of academic/career stuff... I got my first poem published last year! Of course, I got, like, a zillion rejection letters before that, but that's all part of the fun. I was so used to getting rejection letters in the mail that when I got the acceptance note, I almost threw it away, I started skimming it like "yeah, yeah..." But then I saw it there: "We are *pleased* to accept your poem in the September edition of Hardwood Review." I jumped up and down—literally! I mean, this is a huge deal. It's so hard to get poetry published these days!

So things have been up lately. The house I'm living in now is great, and my roommates and I just hit it off right away. It's this huge house in The Fort— we got a porch, a big yard for the dog, everything. We have these great parties and sit up on the roof. I searched *forever* for a good place to live when I got tired of the dorms, so I was really happy when I found Amanda and she hooked me up with this house. Amanda and I have become

really close over the past year. She's pre-vet, so she loves dogs and she treats Marshmallow like he's her own.

Appendix A-2: Stimulus Materials, AIDS Narrative

Interviewer: So, can you tell me about some of the low points you've experienced in your time here?

Student: Well, there's one really terrible thing that I face every day. I know this sounds really tragic, and I guess it kind of is. But, ummm (hesitate)... just this year I was diagnosed with HIV. Getting that diagnosis was definitely the low point of my whole life. It was shocking, the way I found out.

See, a friend of mine wanted to donate blood, and wanted me to go along and donate too--you know, for moral support? So I said sure, and we went down and did. Well, about a week later, they called and asked me to come in again, that they needed to check up on something. I went in and they took some more samples but wouldn't really tell me what it was all about. Then after about 10 days I got this certified letter telling me that my blood was HIV positive--that I had the AIDS virus.

I know what you're wondering— how did I get it? Was I slutting around? I wasn't. Sometimes you aren't always in control. It's a long story. It would take, like, an hour to explain everything, but let's just say I learned the hard way that you can't always trust people. Even when you think you know them. And I don't blame it all on him, I know it was partially my own naiveté. When I look back, there were definitely some signs I should have seen that he wasn't 100% trustworthy, but I ignored them. I mean, you give people benefit of the doubt. And I shouldn't have been drinking. But I do have a lot of anger toward him,

because he was dishonest, and he took advantage of me in the worst way. And he has to live with that knowledge everyday, but I have to live with this disease.

And yeah, it's pretty terrifying. I mean, every time I cough or feel a bit run down, I wonder, is this it? Is this the beginning--you know--of the slide. Sometimes I feel pretty good, but in the back of my mind it's always there. Any day I could take a turn for the worse. (pause) And I know that--at least right now--there's no escape. I know they're trying to find a cure . . . and I know that we all die. But it all just seems so unfair. So horrible. Like a nightmare. (pause) I mean, I feel like I was just starting to live, and now, instead, I'm dying. (pause) It can really get you down.

And every day I have to be very germ conscious. I wash my hands about ten times a day, because if I were to catch a cold or the flu, my body might not be able to resist the infection. I have to be sure I eat right and not overwork or tire myself out too much. Right now, it's that kind of thing mainly . . . and of course it's on my mind all the time. (pause) I think a lot about the fact that I have no brothers or sisters. And now I can't have children. So there's going to be no one to carry on my family line. (pause) My parents will never be grandparents, and I know they were looking forward to that. That may sound silly--like it's just a little thing--but it's been on my mind a lot lately.

And a lot of the other low points in my experience here are kind of related to this. Like having to quit my job. When I get sick, I have to be really careful, and so I ended up missing too many days of work. In the end, they had to let me go. I know they didn't want to— I had a lot of cool friends there— but they had to. And I loved that job— I worked at a

design company, which is perfect because that's what I want to do—I'm majoring in design. Now I work at Kinkos. It's a major step down.

And, as if this wasn't already, like, the year from hell, my best friend moved away. She transferred to the *other* UT (laughs)—so she lives all the way in Texas now. We said we'd keep in touch and visit each other, but I know I haven't done as good a job at that as I wish I could. I guess she hasn't either. I mean, she's been there for me on the phone throughout this whole thing, but we haven't been as close as we'd like to be. I know I should write her more, but it's hard... I don't want to whine about my life all the time, and it seems things aren't going well lately. I mean, I guess I should be thankful that—right now—I'm okay. I just wonder how long that will last.

Interviewer: Okay, can you tell me about some of your positive experiences here?

Student: Yeah, it wasn't all bad. First of all, I think graduating will be one of the high points of my life. I mean, to go through all of this and still graduate from college— I do feel like that's an accomplishment. And I'm proud of that. I'm the first of the grandchildren to graduate, so my family is really excited about this. We're going to have a huge party! In moments like this, I can appreciate life and just forget about the bad things.

Also, we just had our senior art show, and they give out these little prizes— it's only $100, but still— I was *thrilled* when I won second place. My parents were in town and so they got to see what it was I'd been working on all these years. My project was on AIDs, actually, so I also felt like it was meaningful for me in more ways than some people know. And yeah,

it felt really good to get that praise, to hear the head of the department say: "You're good... the stuff you're doing is really important. You're ready for the world." I have a lot of anxiety about getting a job now, I guess everybody does. So this kind of boosted my confidence some. I'm feeling pretty prepared for the graphic design world.

And then there were a lot of high points before this year. I mean, my first three years here were *ideal.* It was like the carefree college life— I partied, I met all these great friends, but I was still able to maintain my grades. I discovered my passion for graphic design, which I had never really been exposed to before. But the best thing, by far, was definitely meeting Samantha— my best friend. She and I were just randomly put together as roommates in that first semester, and we clicked *right away.* We hung out every single day. We joke that we're like the sisters we both always wished we had. Sometimes I wonder what our lives would be like if we hadn't been put together that first year. I mean, it's strange to think how chance can change your whole life. I guess I know that more than most people.

Appendix B: Consent Form

The following is a general description of the study and a reminder of my rights as a potential participant. It is important to keep in mind that this is a research study being conducted in the department of psychology. As in any study, my participation is voluntary. I am free to leave at any time during the study without penalty. The study will take approximately 1 hour to complete, and I will receive 1 hour of experimental credit for participating.

This is a study about perceptions of personal narratives. During the experiment I will listen to a brief 5-minute interview conducted with a students, about the high points and low points of their experience here at UT. Afterwards, I will be asked to report some of my ideas about the individual who was interviewed, and the things that happened in their life. Some of these events will be positive, others will be negative. In order to receive the full hour of extra credit, at the end I may be asked to complete some brief questionnaires for another research study being conducted about campus organizations. If I choose not to complete these measures, I will still receive credit for the 30 minutes I have already contributed

The risks and benefits from participating in this study are minimal. All of my responses will remain completely confidential. Any information that I provide that may link me to the study will be destroyed, so there is no way that my responses can be traced to me. If I withdraw from the study early, my data will be destroyed. I am free to skip any questions that I choose not to answer.

Any questions I may have will be answered by the experimenter. If my questions have not been answered, I can contact the principal investigator (Caroline E. Mann, cmann4@utk.edu, in the Department of Psychology, Austin Peay). This research has been reviewed and approved by the Institutional Review Board – Human Subjects in Research. For research-related problems or questions about participants' rights, the Institutional Review Board may be contacted through the Compliance Office at 974-3466.

I have read and understand the explanation provided to me. I have had all of my questions answered to my satisfaction, and I voluntarily agree to participate in this study. I have been provided with a copy of this form.

Printed Name_____

Signature and Date_____

Appendix C: Empathy

Emotional Response Scale

Please indicate by circling a number the degree to which you experienced each of these emotional reactions while listening to the interview. Do not worry if you were not feeling many of these emotions; only a few may apply to a particular interview. Be sure to circle a response for each item.

	not at all			moderately			extremely
1. alarmed	1	2	3	4	5	6	7
2. grieved	1	2	3	4	5	6	7
3. sympathetic	1	2	3	4	5	6	7
4. intent	1	2	3	4	5	6	7
5. softhearted	1	2	3	4	5	6	7
6. troubled	1	2	3	4	5	6	7
7. warm	1	2	3	4	5	6	7
8. concerned	1	2	3	4	5	6	7
9. distressed	1	2	3	4	5	6	7

10. low-spirited	1	2	3	4	5	6	7
11. intrigued	1	2	3	4	5	6	7
12. compassionate	1	2	3	4	5	6	7

---

13. upset	1	2	3	4	5	6	7
14. disturbed	1	2	3	4	5	6	7
15. tender	1	2	3	4	5	6	7
16. worried	1	2	3	4	5	6	7

---

17. moved	1	2	3	4	5	6	7
18. disconcerted	1	2	3	4	5	6	7
19. feeling low	1	2	3	4	5	6	7
20. perturbed	1	2	3	4	5	6	7

---

21. heavy-hearted	1	2	3	4	5	6	7
22. sorrowful	1	2	3	4	5	6	7
23. bothered	1	2	3	4	5	6	7
24. kind	1	2	3	4	5	6	7

---

25. sad	1	2	3	4	5	6	7
26. touched	1	2	3	4	5	6	7

Appendix D: Closed-Ended Attributions

Explanations Questionnaire

The student in this interview talked about a number of high points and low points in their life. We're interested in finding out what you believe may have caused, or contributed to, these positive and negative events. We know you don't have all the information, just take your best guess. *In your opinion,* rate on a scale from 1 to 7 how much you believe situational (or factors in the environment) and dispositional (factors in the person) influenced the following events:

1	2	3	4	5	6	7
not very much			neutral			very much so

(Bipolar Disorder Vignette):
High Points
1. Getting her new dog...
2. Writing published...
3. Finding a good apartment in "The Fort"...

Low Points:
1. Becoming depressed first semester.
2. Being in psychiatric hospital.
3. Losing Journal.

(HIV Vignette):
High Points:
1. Graduating.
2. Winning the art prize.
3. Meeting best friend, Samantha.

Low Points:
1. Getting HIV.
2. Losing job at design firm.
3. Best friend moving.

Appendix E: Social Distance Measure

Social Activities Questionnaire

Based on the interview you heard, please indicate (on a scale of 1-7) how likely or unlikely you would be to engage in the following theoretical situations with this student, *assuming you have free choice:*

1	2	3	4	5	6	7
Highly Unlikely	Pretty Unlikely	Somewhat Unlikely	Neither Likely or Unlikely	Somewhat Likely	Pretty Likely	Highly Likely

_____ 1. Collaborating on a project for school or work?

_____ 2. Dating? (assume you are single & this person is your preferred gender)

_____ 3. Being housemates?

_____ 4. Having a conversation?

_____ 5. Being friends?

_____ 6. Hiring them for a job?

_____ 7. Having them as a neighbor?

Appendix F: Motivation to Control Prejudice

Personal Beliefs Survey

Please read each of the following statements carefully. Indicate the extent to which you agree or disagree with each statement by filling in the appropriate bubble according to the following scale. Your responses will remain completely confidential.

3	-2	-1	0	+1	+2	+3
strongly disagree		**disagree some**	**no opinion**	**agree some**		**strongly agree**

-1. In today's society it is important that one not be perceived as prejudiced in any manner.
2. I always express my opinions, regardless of how controversial they might be.
3. I get angry with myself when I have a thought or feeling that might be considered prejudiced.
4. If I were participating in a class discussion and a Black student expressed an opinion with which I disagreed, I would be hesitant to express my own viewpoint.
5. Going through life worrying about whether you might offend someone is just more trouble than it's worth.
6. It's important to me that other people not think I'm prejudiced.
7. I feel it's important to behave according to society's standards.
8. I'm careful not to offend my friends, but I don't worry about offending people I don't know or don't like.
9. I think that it is important to speak one's mind rather than to worry about offending someone.
10. It's never acceptable to express one's prejudices.
11. I feel guilty when I have a negative thought or feeling about a Black person.
12. When speaking to a Black person, it's important to me that he/she not think I'm prejudiced.
13. It bothers me a great deal when I think I've offended someone, so I'm always careful to consider other people's feelings.
14. If I have a prejudiced thought or feeling, I keep it to myself.
15. I would never tell jokes that might offend others.
16. I'm not afraid to tell others what I think, even when I know they disagree with` me.
17. If someone who made me uncomfortable sat next to me on a bus, I would not hesitate to move to another seat.

Appendix G: Perspective-Taking

Interpersonal Reactivity Index

The following statements inquire about your thoughts and feelings in a variety of situations. For each item, indicate how well it describes you by choosing the appropriate number on the scale at the top of the page: 1, 2, 3, 4, or 5. When you have decided on your answer, fill in the number on the answer sheet next to the item number. READ EACH ITEM CAREFULLY BEFORE RESPONDING. Answer as honestly as you can. Thank you.

ANSWER SCALE:

1	2	3	4	5
DOES NOT DESCRIBE ME WELL				DESCRIBES ME VERY WELL

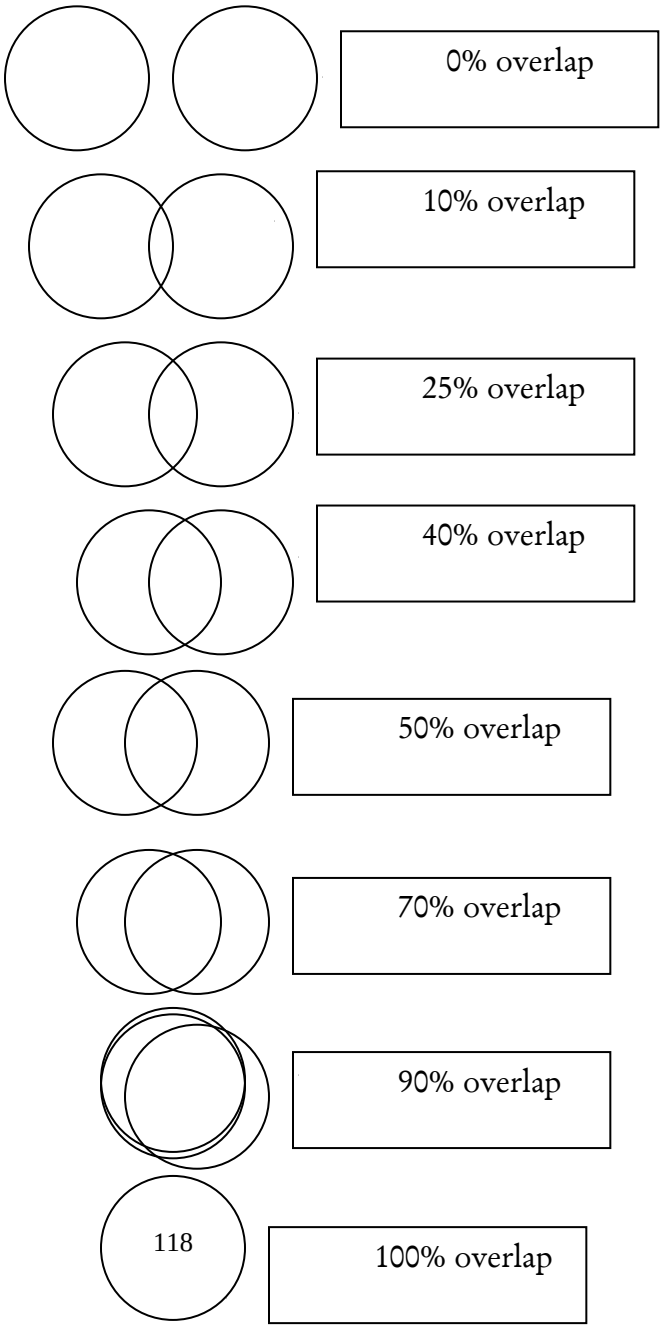
1. I daydream and fantasize, with some regularity, about things that might happen to me.
2. I often have tender, concerned feelings for people less fortunate than me.
3. I sometimes find it difficult to see things from the "other guy's" point of view.
4. Sometimes I don't feel very sorry for other people when they are having problems.
5. I really get involved with the feelings of the characters in a novel.
6. In emergency situations, I feel apprehensive and ill-at-ease.
7. I am usually objective when I watch a movie or play, and I don't often get completely caught up in it.
8. I try to look at everybody's side of a disagreement before I make a decision.
9. When I see someone being taken advantage of, I feel kind of protective towards them.
10. I sometimes feel helpless when I am in the middle of a very emotional situation.
11. I sometimes try to understand my friends better by imagining how things look from their perspective.

12. Becoming extremely involved in a good book or movie is somewhat rare for me.
13. When I see someone get hurt, I tend to remain calm.
14. Other people's misfortunes do not usually disturb me a great deal.
15. If I'm sure I'm right about something, I don't waste much time listening to other people's arguments.
16. After seeing a play or movie, I have felt as though I were one of the characters.
17. Being in a tense emotional situation scares me.
18. When I see someone being treated unfairly, I sometimes don't feel very much pity for them.
19. I am usually pretty effective in dealing with emergencies.
20. I am often quite touched by things that I see happen.
21. I believe that there are two sides to every question and try to look at them both.
22. I would describe myself as a pretty soft-hearted person.
23. When I watch a good movie, I can very easily put myself in the place of a leading character.
24. I tend to lose control during emergencies.
25. When I'm upset at someone, I usually try to "put myself in his shoes" for a while.
26. When I am reading an interesting story or novel, I imagine how I would feel if the events in the story were happening to me.
27. When I see someone who badly needs help in an emergency, I go to pieces.
28. Before criticizing somebody, I try to imagine how I would feel if I were in their place.

Appendix H: Self-Other Overlap

Oneness Measure

Using the following diagrams, please indicate to what extent you feel you overlap or do not overlap with the person who was interviewed in terms of perceived similarity. This can range from 0% ("we have nothing in common at all") to 100% ("we are practically the same person"):



Appendix I: Self-Esteem Measure

Self Questionnaire

Instructions: Below is a list of statements dealing with your general feelings about yourself. If you strongly agree, circle **SA**. If you agree with the statement, circle **A**. If you disagree, circle **D**. If you strongly disagree, circle **SD**.

1.	On the whole, I am satisfied with myself.	SA A D SD
2.	At times, I think I am no good at all.	SA A D SD
3.	I feel that I have a number of good qualities.	SA A D SD
4.	I am able to do things as well as most other people.	SA A D SD
5.	I feel I do not have much to be proud of.	SA A D SD
6.	I certainly feel useless at times.	SA A D SD
7.	I feel that I'm a person of worth, at least on an equal plane with others.	SA A D SD
8.	I wish I could have more respect for myself.	SA A D SD
9.	All in all, I am inclined to feel that I am a failure.	SA A D SD
10.	I take a positive attitude toward myself.	SA A D SD

Appendix J: Mental Health Questionnaire

Questions about history of mental illness

Please answer the following short questions. Circle your answer or write it in the space provided.

1. Have you ever been diagnosed with a mental illness? YES NO

2. If so, what was it? _____

3. Have you ever had a close friend or family member diagnosed with a mental illness? YES NO

4. If so, what was it? _____

5. Have you ever known an acquaintance or coworker diagnosed with a mental illness? YES NO

6. If so, what was it? _____

7. Have you ever been prescribed psychiatric medication? YES NO

8. Have you ever been in therapy? YES NO

9. If so, for approximately how long? _____

Appendix K: Behavioral Intentions Toward the Group (Budget Cuts Task)

Student Group Budget Survey

Recent budget cuts have unfortunately required the University to reduce its financial contribution to many student organizations. It is a difficult and painful decision to make, but some student organizations funding will be cut. In order to determine which groups' budgets will be cut, we have decided to elicit the opinions of UT students. This brief, anonymous survey will allow the university to make funding decisions that best reflect the desired of the students. With your help, we'll be able to move past this difficult period. Again, your responses will be completely anonymous. Thank you for providing us with your opinions.

Below you will see a list of student organizations that have been selected to have reduced budgets. Please rank order the following organizations according to which organization should lose the most funding. Use a 10 for the organization that you think should receive the most budget cuts, and a 1 for the organization that should receive the least budget cuts.

Remember: 10 = most budget cuts

1 = least budget cuts

_____ Black Student Alliance

_____ Campus Crusade for Christ

_____ Alliance for the Mentally Ill

_____ Fencing Club at UT

_____ Chinese Students and Scholars

_____ Scuba Club

_____ Cycling Club

_____ Italian Club at UTK

_____ Psychology Student Association

_____ Muslim Student Association

_____ Turkish Student Association

_____ Students for AIDS Awareness

Appendix L: Feeling Thermometer

We are interested in people's attitudes towards, and overall evaluations of, members of various social groups. Below you'll see something that looks like a thermometer. You'll be using it to indicate your attitude towards different groups. If you have a positive attitude toward typical members of the group, you would give them a score somewhere between 50° and 100°, depending on how favorable your evaluation of that group is. On the other hand, if you have a negative attitude toward typical members of the group, you would give them a score somewhere between 0° and 50°, depending on how unfavorable your evaluation of that group is. The degree labels will help you locate each group on the thermometer. You can use any number between 0° and 100°. Please answer honestly according to how you personally feel about each of these groups. Your responses will be kept completely confidential.

Positive	100°.....extremely positive
	90°.....very positive
	80°.....quite positive
	70°.....fairly positive
	60°.....slightly positive
	50°.....neither positive nor negative
	40°.....slightly negative
	30°.....fairly negative
	20°.....quite negative
	10°.....very negative
Negative	0°.....extremely negative

Write your responses in the blank provided next to each group name:

Homeless people _____

Lawyers _____

Fraternity men _____

Hispanics _____

Surgeons _____

Women _____

Professional athletes _____

Single mothers _____

Stock brokers _____

People with AIDS _____

Right-Wing Christians _____

Talk show hosts _____

Muslims _____

College Professors _____

Nurses _____

Politicians _____

Doctors _____

Mentally ill persons _____

Blacks _____ Computer Programmers _____

Scientists _____ Mormons ____

Vita

Caroline Mann was born in Houghton, Louisiana in 1982. She moved to Charlotte, NC at the age of 4 and graduated from South Mecklenburg High School in 2000. Caroline earned her B.A. in Psychology from the Univeristy of North Carolina at Asheville, graduating Magna Cum Laude in 2004 as a Distinguished Research Scholar. While there, her primary mentor was Melissa Himelein. She was then accepted to the PhD program in Clinical Psychology at the Unviersity of Tennesee at Knoxville, where she completed her predissertation project on mental illness stigma in 2006. Caroline completed her Comprehensive Paper in 2008, working with Bob Wahler on a time series analysis of a therapy case treated with narrative restructuring therapy. Caroline will begin her APA-approved internship in 2009 at the University of Tennesee Counseling Center.

In additon to her work in psychology, Caroline has served as the editor of literary magainzes in high school and college, and has publisehd numerous poems in national journals.